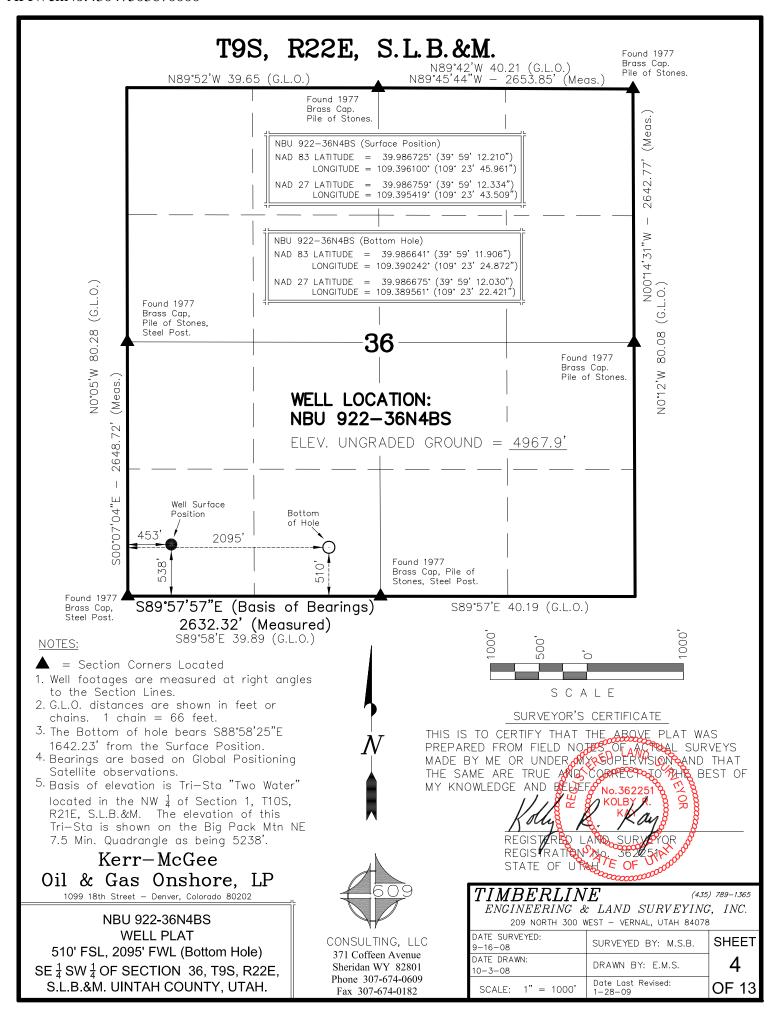
		SOURCES MINING		FORI					
APPLI	CATION FOR	PERMIT TO DRILL	-		1. WELL NAME and	NUMBER NBU 922-36N4BS			
2. TYPE OF WORK DRILL NEW WELL (REENTER P&	A WELL (A) DEEDE	EN WELL		3. FIELD OR WILDCAT				
4. TYPE OF WELL			IN WELL I		NATURAL BUTTES 5. UNIT or COMMUNITIZATION AGREEMENT NAME				
6. NAME OF OPERATOR		ed Methane Well: NO GAS ONSHORE, L.P.			7. OPERATOR PHO	NATURAL BUTTES NE 720 929-6587			
8. ADDRESS OF OPERATOR		enver, CO, 80217			9. OPERATOR E-MA		com		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)	. BOX 173773, B	11. MINERAL OWNE	.—.		12. SURFACE OWN	ERSHIP			
ML 22650 13. NAME OF SURFACE OWNER (if box 12	FEE (III)	FEDERAL INI	DIAN (STATE (~ ~					
15. ADDRESS OF SURFACE OWNER (if box					16. SURFACE OWN				
15. ADDRESS OF SURFACE OWNER (II DOX	12 - 1ee)					ER E-MAIL (II DOX 1	12 - 1ee)		
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		TION FROM	19. SLANT		_				
	ion) NO	VERTICAL DIF	RECTIONAL 📵 H	ORIZONTAL (
20. LOCATION OF WELL	FO	OTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN		
LOCATION AT SURFACE	538 FS	SL 453 FWL	SWSW	36	9.0 S	22.0 E	S		
Top of Uppermost Producing Zone		L 2095 FWL	SESW	36	9.0 S	22.0 E	S		
At Total Depth	510 FS	L 2095 FWL	SESW	36	9.0 S	22.0 E	S		
21. COUNTY UINTAH		22. DISTANCE TO N	510		23. NUMBER OF AC	203	UNII		
		(Applied For Drilling		SAME POOL	26. PROPOSED DEPTH MD: 8994 TVD: 8600				
27. ELEVATION - GROUND LEVEL 4968		28. BOND NUMBER	22013542	29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF AP Permit #43-8496					
		A	TTACHMENTS		,				
VERIFY THE FOLLOWING	ARE ATTACH	ED IN ACCORDAN	CE WITH THE U	TAH OIL AND (GAS CONSERVATI	ON GENERAL RU	ILES		
✓ WELL PLAT OR MAP PREPARED BY	LICENSED SUR	VEYOR OR ENGINEER	R COM	IPLETE DRILLING	G PLAN				
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRE	EMENT (IF FEE SURF	ACE) FORI	M 5. IF OPERATO	R IS OTHER THAN T	HE LEASE OWNER			
DIRECTIONAL SURVEY PLAN (IF DID DRILLED)	OGRAPHICAL MAI	P							
NAME Kathy Schneebeck-Dulnoan	Kathy Schneebeck-Dulnoan TITLE Staff Regulatory Analyst PHONE 720								
SIGNATURE	EMAIL Kathy.So	chneebeckDulnoan@aı	nadarko.com						
API NUMBER ASSIGNED 43047503670000	APPR	ROVAL		Bal	Rejill				
			Permi	ermit Manager					

API Well No: 43047503670000 Received: 4/23/2009

	Prop	osed Hole, Casing, a	nd Cement		
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)	
Prod	7.875	4.5	0	8994	
Pipe	Grade	Length	Weight		
	Grade N-80 LT&C	8994	11.6		

API Well No: 43047503670000 Received: 4/23/2009

	Prop	oosed Hole, Casing, a	nd Cement		
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)	
Surf	12.25	9.625	0	2100	
Pipe	Grade	Length	Weight		
	Grade J-55 LT&C	2100	36.0		





ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27) NBU 922-36M PAD NBU 922-36N4BS

NBU 922-36N4BS

Plan: Design #1

Standard Planning Report

23 April, 2009







NBU 922-36N4BS **UINTAH COUNTY, UTAH (nad 27)** SECTION 36 T9SS R22 E 538' FSL, 453' FWL 39° 59' 12.336 N 109° 23' 43.512 W



Slot

WELL DETAILS: NBU 922-36N4BS

Ground Level: 4966.00 +N/-S +E/-W

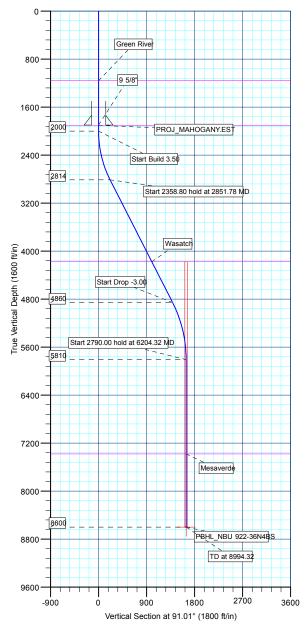
Northing 14525268.28 Easting 2089889.76 Longitude 109° 23' 43.512 W Latittude 0.00 39° 59' 12.336 N 0.00

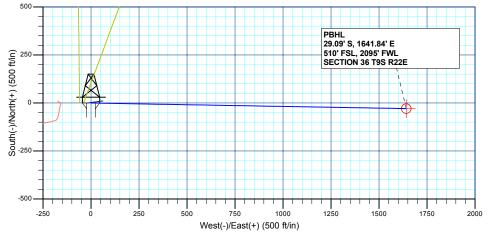
WELLBORE TARGET DETAILS (LAT/LONG)										
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape				
PBHL	8600.00	-29.09	1641.84	39° 59' 12.048 N	109° 23' 22.416 W	Circle (Radius: 25.00)				

	SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-		
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00			
2851.78	29.81	91.01	2813.86	-3.84	216.61	3.50	91.01	216.65			
5210.58	29.81	91.01	4860.49	-24.61	1389.13	0.00	0.00	1389.35			
6204.32	0.00	0.00	5810.00	-29.09	1641.84	3.00	180.00	1642.10			
8994.32	0.00	0.00	8600.00	-29.09	1641.84	0.00	0.00	1642.10	PBHL NBU 922-36N4BS		



KB ELEV: WELL @ 4984.00ft (Original Well Elev) GRD ELEV: 4966.00





FORMATION TOP DETAILS

TVDPath MDPath Formation 1161.00 1161.00 Green River 1904.00 1904.00 PROJ_MAHOGANY.EST 4178.00 4423.99 Wasatch 7381.00 7775.32 Mesaverde

CASING DETAILS								
TVD	MD	Name	Size					
1900.00		9 5/8"	9.62					

Plan: Design #1 (NBU 922-36N4BS/NBU 922-36N4BS)

Created By: Robert H. Scott



Planning Report



Database: EDM 2003.21 Single User Db Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27) NBU 922-36M PAD

Site: Well: NBU 922-36N4BS Wellbore: NBU 922-36N4BS Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

Minimum Curvature

Project UINTAH COUNTY, UTAH (nad 27),

Map System: Universal Transverse Mercator (US Survey Fee System Datum: Mean Sea Level

NAD 1927 - Western US Geo Datum: Map Zone: Zone 12N (114 W to 108 W)

NBU 922-36M PAD, SECTION 36 T9SS R22 E Site

Northing: 14,525,268.28 ft 39° 59' 12.336 N Site Position: Latitude: From: Lat/Long Easting: 2,089,889.76ft Longitude: 109° 23' 43.512 W **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 1.03°

Well NBU 922-36N4BS

Well Position +N/-S 0.00 ft Northing: 14,525,268.28 ft Latitude: 39° 59' 12.336 N +E/-W 0.00 ft Easting: 2,089,889.76 ft Longitude: 109° 23' 43.512 W

Position Uncertainty 0.00 ft Wellhead Elevation: ft Ground Level: 4,966.00 ft

NBU 922-36N4BS Wellbore

Magnetics Model Name Sample Date Declination **Dip Angle** Field Strength (°) (nT) (°) 52.590 BGGM2008 1/20/2009 11.36 65.97

Design #1 Design

Audit Notes:

Version: Phase: **PLAN** Tie On Depth: 0.00

Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 91.01

Plan Section	s									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,851.78	29.81	91.01	2,813.86	-3.84	216.61	3.50	3.50	0.00	91.01	
5,210.58	29.81	91.01	4,860.49	-24.61	1,389.13	0.00	0.00	0.00	0.00	
6,204.32	0.00	0.00	5,810.00	-29.09	1,641.84	3.00	-3.00	0.00	180.00	
8,994.32	0.00	0.00	8,600.00	-29.09	1,641.84	0.00	0.00	0.00	0.00 PI	3HL_NBU 922-36

5,100.00

5,200.00

5.210.58

5,300.00

5,400.00

5,500.00

5,600.00

5,700.00

5,800.00

5,900.00

6,000.00

6,100.00

6,200.00

6,204.32

6,300.00

Start Drop -3.00

29.81

29.81

29.81

27.13

24.13

21.13

18.13

15.13

12.13

9.13

6.13

3 13

0.13

0.00

0.00

Start 2790.00 hold at 6204.32 MD

91.01

91.01

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91.01

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4,764.55

4,851.31

4.860.49

4,939.09

5,029.24

5,121.53

5,215.71

5,311.52

5,408.69

5,506.96

5,606.07

5.705.73

5,805.68

5,810.00

5,905.68

-23.63

-24.52

-24.61

-25.36

-26.13

-26.81

-27.41

-27.91

-28.33

-28.66

-28.89

-29.03

-29.09

-29.09

-29.09

1,334.16

1,383.87

1.389.13

1,431.75

1,474.99

1,513.46

1,547.04

1,575.65

1,599.21

1,617.65

1,630.93

1,639.00

1,641.84

1,641.84

1,641.84

1,334.37

1,384.09

1.389.35

1,431.97

1,475.22

1,513.70

1,547.29

1,575.90

1,599.46

1,617.91

1,631.18

1,639.25

1,642.10

1,642.10

1,642.10

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Weatherford International Ltd.



Planning Report



Database: Company: Project: Site:

Well:

Wellbore:

Design:

EDM 2003.21 Single User Db ANADARKO PETROLEUM CORP. UINTAH COUNTY, UTAH (nad 27)

NBU 922-36M PAD NBU 922-36N4BS NBU 922-36N4BS Design #1 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

True

Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build	1 3.50								
2,000.00 2,100.00 2,200.00	0.00 3.50 7.00	0.00 91.01 91.01	2,000.00 2,099.94 2,199.50	0.00 -0.05 -0.22	0.00 3.05 12.20	0.00 3.05 12.20	0.00 3.50 3.50	0.00 3.50 3.50	0.00 0.00 0.00
2,300.00 2,400.00 2,500.00 2,600.00 2,700.00 2,800.00	10.50 14.00 17.50 21.00 24.50	91.01 91.01 91.01 91.01 91.01	2,298.32 2,396.03 2,492.26 2,586.66 2,678.86 2,768.54	-0.49 -0.86 -1.34 -1.93 -2.61	27.41 48.62 75.75 108.71 147.37	27.41 48.63 75.77 108.73 147.40 191.62	3.50 3.50 3.50 3.50 3.50	3.50 3.50 3.50 3.50 3.50	0.00 0.00 0.00 0.00 0.00
,	.80 hold at 285		2,700.54	-3.38	191.09	191.02	3.30	3.50	0.00
2,851.78 2,900.00 3,000.00 3,100.00 3,200.00 3,300.00 3,400.00 3,500.00 3,600.00 3,700.00 3,800.00 3,900.00 4,000.00	29.81 29.81 29.81 29.81 29.81 29.81 29.81 29.81 29.81 29.81 29.81 29.81	91.01 91.01 91.01 91.01 91.01 91.01 91.01 91.01 91.01 91.01 91.01 91.01	2,813.86 2,855.70 2,942.47 3,029.23 3,116.00 3,202.76 3,289.53 3,376.30 3,463.06 3,549.83 3,636.59 3,723.36 3,810.12	-3.84 -4.26 -5.14 -6.02 -6.90 -7.78 -8.66 -9.55 -10.43 -11.31 -12.19 -13.07 -13.95	216.61 240.58 290.29 340.00 389.71 439.41 489.12 538.83 588.54 638.25 687.96 737.66 787.37	216.65 240.62 290.33 340.05 389.77 439.48 489.20 538.92 588.63 638.35 688.06 737.78 787.50	3.50 0.00 0.00 0.00 0.00 0.00 0.00 0.00	3.50 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
4,100.00 4,200.00 4,300.00 4,400.00	29.81 29.81 29.81 29.81	91.01 91.01 91.01 91.01	3,896.89 3,983.66 4,070.42 4,157.19	-14.83 -15.71 -16.59 -17.47	837.08 886.79 936.50 986.21	837.21 886.93 936.64 986.36	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Wasatch 4,423.99 4,500.00	29.81 29.81	91.01 91.01	4,178.00 4,243.95	-17.68 -18.35	998.13 1,035.91	998.29 1,036.08	0.00 0.00	0.00 0.00	0.00 0.00
4,600.00 4,700.00 4,800.00 4,900.00 5,000.00	29.81 29.81 29.81 29.81 29.81	91.01 91.01 91.01 91.01 91.01	4,330.72 4,417.49 4,504.25 4,591.02 4,677.78	-19.23 -20.11 -20.99 -21.87 -22.75	1,085.62 1,135.33 1,185.04 1,234.75 1,284.46	1,085.79 1,135.51 1,185.22 1,234.94 1,284.66	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00



Planning Report



Database: Company: Project: EDM 2003.21 Single User Db ANADARKO PETROLEUM CORP. UINTAH COUNTY, UTAH (nad 27)

 Site:
 NBU 922-36M PAD

 Well:
 NBU 922-36N4BS

 Wellbore:
 NBU 922-36N4BS

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

True

Minimum Curvature

Planned	Survey
---------	--------

nea ourvey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,400.00 6,500.00 6,600.00 6,700.00 6,800.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	6,005.68 6,105.68 6,205.68 6,305.68 6,405.68	-29.09 -29.09 -29.09 -29.09 -29.09	1,641.84 1,641.84 1,641.84 1,641.84	1,642.10 1,642.10 1,642.10 1,642.10 1,642.10	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
6,900.00 7,000.00 7,100.00 7,200.00 7,300.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	6,505.68 6,605.68 6,705.68 6,805.68 6,905.68	-29.09 -29.09 -29.09 -29.09 -29.09	1,641.84 1,641.84 1,641.84 1,641.84	1,642.10 1,642.10 1,642.10 1,642.10 1,642.10	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
7,400.00 7,500.00 7,600.00 7,700.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	7,005.68 7,105.68 7,205.68 7,305.68	-29.09 -29.09 -29.09 -29.09	1,641.84 1,641.84 1,641.84 1,641.84	1,642.10 1,642.10 1,642.10 1,642.10	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Mesaverde									
7,775.32	0.00	0.00	7,381.00	-29.09	1,641.84	1,642.10	0.00	0.00	0.00
7,800.00 7,900.00 8,000.00 8,100.00 8,200.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	7,405.68 7,505.68 7,605.68 7,705.68 7,805.68	-29.09 -29.09 -29.09 -29.09 -29.09	1,641.84 1,641.84 1,641.84 1,641.84	1,642.10 1,642.10 1,642.10 1,642.10 1,642.10	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
8,300.00 8,400.00 8,500.00 8,600.00 8,700.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	7,905.68 8,005.68 8,105.68 8,205.68 8,305.68	-29.09 -29.09 -29.09 -29.09 -29.09	1,641.84 1,641.84 1,641.84 1,641.84	1,642.10 1,642.10 1,642.10 1,642.10 1,642.10	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
8,800.00 8,900.00	0.00 0.00	0.00 0.00	8,405.68 8,505.68	-29.09 -29.09	1,641.84 1,641.84	1,642.10 1,642.10	0.00 0.00	0.00 0.00	0.00 0.00
PDHL_NBU	922-36N4BS 0.00	0.00	8.600.00	-29.09	1,641.84	1,642.10	0.00	0.00	0.00

Desi	nn	Tar	ater
Desi	yıı	ı aı	yets

200.99										
Target Name	•									
- hit/miss	target Dip	Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting		
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Latitude	Longitude

PBHL_NBU 922-36N4 0.00 0.00 8,600.00 -29.09 1,641.84 14,525,268.75 2,091,531.85 39° 59' 12.048 N 109° 23' 22.416 W

- Circle (radius 25.00)

Cas	ina	Points	

Casing Points							
	Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter	
	(ft)	(ft)		Name	(in)	(in)	
	1,900.00	1,900.00	9 5/8"		9.62	12.25	

⁻ plan hits target center



Planning Report



Database: Company: Project: Site: EDM 2003.21 Single User Db ANADARKO PETROLEUM CORP. UINTAH COUNTY, UTAH (nad 27)

 Site:
 NBU 922-36M PAD

 Well:
 NBU 922-36N4BS

 Wellbore:
 NBU 922-36N4BS

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

True

Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,161.00	1,161.00	Green River				
1,904.00	1,904.00	PROJ_MAHOGANY.EST				
4,423.99	4,178.00	Wasatch				
7,775.32	7,381.00	Mesaverde				

Plan Annot	ations					
	Measured	Vertical	Local Coor	dinates		
	Depth	Depth	+N/-S	+E/-W		
	(ft)	(ft)	(ft)	(ft)	Comment	
	2,000.00	2,000.00	0.00	0.00	Start Build 3.50	
	2,851.78	2,813.86	-3.84	216.61	Start 2358.80 hold at 2851.78 MD	
	5,210.58	4,860.49	-24.61	1,389.13	Start Drop -3.00	
	6,204.32	5,810.00	-29.09	1,641.84	Start 2790.00 hold at 6204.32 MD	
	8,994.32	8,600.00	-29.09	1,641.84	TD at 8994.32	



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27) NBU 922-36M PAD NBU 922-36N4BS

NBU 922-36N4BS Design #1

Anticollision Report

23 April, 2009





Anticollision Report

TVD Reference:

MD Reference:



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev)
WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 2003.21 Single User Db

Offset TVD Reference: Offset Datum

Reference Design #1

Filter type: NO GLOBAL FILTER: Using user defined selection & filtering criteria

Interpolation Method: Stations Error Model: ISCWSA

Depth Range:0.00 to 20,000.00ftScan Method:Closest Approach 3DResults Limited by:Maximum center-center distance of 10,000.00ftError Surface:Elliptical Conic

Warning Levels Evaluated at: 2.00 Sigma

Survey Tool Program	1	Date 1/20/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,994.32	2 Design #1 (NBU 922-36N4BS)	MWD	MWD - Standard

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Dista Between Centres (ft)	nce Between Ellipses (ft)	Separation Factor	Warning
NBU 922-36M PAD						
CIGE 221 EXISTING WELL - CIGE 221 EXISTING - CIG CIGE 221 EXISTING WELL - CIGE 221 EXISTING - CIG CIGE 221 EXISTING WELL - CIGE 221 EXISTING - CIG NBU 922-36L3DS - NBU 922-36L3DS - Design #1 NBU 922-36L4BS - NBU 922-36L4BS - Design #1 NBU 922-36M3T - NBU 922-36M3T - Design #1	1,396.25 1,400.00 2,100.00 2,000.00 2,000.00 2,000.00	1,396.59 1,400.00 2,098.54 2,000.00 2,000.00 2,000.00	156.37 156.38 169.45 58.83 39.22 19.61	150.65 150.64 160.85 50.11 30.49 10.89	4.495	ES

Offset D	esign	NBU 9	22-36M F	PAD - CIG	E 221 E	XISTING V	WELL - CIGE	221 EXIS	TING - C	GE 221	EXISTING	1	Offset Site Error:	0.00 ft
		-NS-GYRO-N											Offset Well Error:	0.00 ft
Refer		Offs		Semi Major					Dist					
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbor +N/-S	e Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	0.00	0.00	0.00	-86.86	9.51	-173.40	173.66					
100.00	100.00	100.00	100.00	0.09	0.11	-86.86	9.51	-173.40	173.66	173.46	0.20	864.032		
200.00	200.00	200.00	200.00	0.32	0.37	-86.86	9.51	-173.40	173.66	172.97	0.69	251.243		
300.00	300.00	299.99	299.99	0.54	0.51	-86.93	9.29	-173.41	173.66	172.61	1.05	165.664		
400.00	400.00	400.00	400.00	0.77	0.66	-87.00	9.08	-173.43	173.67	172.24	1.43	121.835		
500.00	500.00	500.00	500.00	0.99	0.91	-87.00	9.08	-173.43	173.67	171.77	1.90	91.415		
600.00	600.00	600.55	600.55	1.22	1.08	-87.05	8.92	-173.28	173.51	171.22	2.29	75.718		
700.00	700.00	700.65	700.64	1.44	1.20	-87.14	8.63	-172.95	173.16	170.52	2.64	65.552		
800.00	800.00	801.31	801.30	1.67	1.37	-87.26	8.26	-172.40	172.60	169.56	3.04	56.778		
900.00	900.00	902.62	902.61	1.89	1.58	-87.49	7.52	-171.28	171.46	167.99	3.47	49.453		
1,000.00	1,000.00	1,003.86	1,003.82	2.12	1.80	-87.88	6.26	-169.43	169.59	165.68	3.91	43.356		
1,100.00	1,100.00	1,106.25	1,106.16	2.34	2.03	-88.38	4.70	-166.41	166.59	162.21	4.37	38.084		
1,200.00	1,200.00	1,207.17	1,206.98	2.56	2.28	-88.75	3.55	-162.38	162.57	157.72	4.85	33.545		
1,300.00	1,300.00	1,306.58	1,306.30	2.79	2.53	-89.05	2.63	-158.15	158.30	152.98	5.32	29.768		
1,396.25	1,396.25	1,396.59	1,396.26	3.01	2.72	-89.94	0.17	-156.37	156.37	150.65	5.72	27.3310	CC	
1,400.00	1,400.00	1,400.00	1,399.66	3.01	2.72	-89.99	0.02	-156.38	156.38	150.64	5.74	27.258 E	S	
1,500.00	1,500.00	1,498.69	1,498.27	3.24	2.89	-91.46	-4.00	-156.95	157.01	150.89	6.12	25.645		
1,600.00	1,600.00	1,598.39	1,597.89	3.46	3.05	-92.81	-7.76	-158.03	158.23	151.72	6.51	24.300		
1,700.00	1,700.00	1,698.07	1,697.48	3.69	3.23	-94.20	-11.71	-159.24	159.69	152.77	6.91	23.102		
1,800.00	1,800.00	1,798.30	1,797.62	3.91	3.42	-95.67	-15.92	-160.41	161.22	153.89	7.33	22.000		
1,900.00	1,900.00	1,897.99	1,897.21	4.14	3.62	-97.10	-20.12	-161.54	162.81	155.05	7.75	21.001		



Anticollision Report

MD Reference:



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS TVD Reference:

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

EDM 2003.21 Single User Db Database:

_	_)-NS-GYRO-N											Offset Well Error:	0.00 ft
Refer		Offs		Semi Major				<u>.</u> .	Dista			<u>.</u>		
leasured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbor +N/-S (ft)	re Centre +E/-W (ft)	Between Centres (ft)	Ellipses (ft)	Minimum Separation (ft)	Factor	Warning	
2,000.00		1,997.45	1,996.58	4.36	3.83	-98.47	-24.24	-162.87	164.70	156.52	8.18	20.132		
2,100.00		2,098.54	2,097.58	4.57	4.05	169.37	-28.26	-164.02	169.45	160.85	8.61	19.684 9	SF.	
2,200.00		2,198.34	2,197.29	4.78	4.28	168.59	-32.34	-164.63	179.74	170.74	9.00	19.981	,,	
2,300.00			2,296.01	5.01	4.51	168.13	-36.63	-165.04	195.83	186.47	9.36	20.925		
2,400.00		2,395.50	2,394.28	5.27	4.75	168.06	-40.72	-165.28	217.58	207.89	9.70	22.440		
2,500.00			2,489.30	5.59	4.98	168.34	-44.24	-165.59	245.14	235.15	10.00	24.522		
2,000.00	2, .02.20	2, .00.00	2, 100.00	0.00	1.00	.00.0		100.00	2.0	200.10	10.00	2022		
2,600.00	2,586.66	2,585.54	2,584.20	5.99	5.21	168.88	-47.19	-166.12	278.55	268.28	10.27	27.130		
2,700.00	2,678.86	2,677.41	2,676.03	6.50	5.43	169.49	-49.70	-166.52	317.42	306.92	10.51	30.215		
2,800.00	2,768.54	2,766.15	2,764.74	7.13	5.65	170.01	-52.36	-167.00	361.94	351.23	10.71	33.785		
2,851.78	2,813.86	2,810.98	2,809.55	7.52	5.76	170.26	-53.69	-167.32	387.18	376.37	10.81	35.819		
2,900.00	2,855.70	2,852.64	2,851.18	7.90	5.86	170.64	-54.92	-167.63	411.37	400.33	11.04	37.274		
3,000.00		2,938.15	2,936.65	8.75	6.07	171.27	-57.52	-168.29	461.60	450.08	11.52	40.078		
3,100.00		3,022.83	3,021.28	9.65	6.28	171.73	-60.55	-169.18	512.15	500.14	12.01	42.632		
3,200.00		3,108.75	3,107.12	10.59	6.49	172.07	-63.90	-170.19	562.85	550.33	12.53	44.935		
3,300.00		3,194.64	3,192.93	11.56	6.70	172.34	-67.41	-171.21	613.60	600.55	13.05	47.021		
3,400.00	3,289.53	3,281.39	3,279.60	12.55	6.92	172.56	-71.13	-172.20	664.34	650.75	13.59	48.890		
0.500.00	0.070.00	0.000.01	0.000.40	10.5-		470.70	75.00	470.00	745.65	700.00		FC		
3,500.00		3,368.31	3,366.42	13.55	7.14	172.72	-75.06	-173.09	715.00	700.86	14.14	50.577		
3,600.00		3,452.00	3,450.02	14.57	7.35	172.85	-78.91	-173.96	765.68	751.00	14.68	52.151		
3,700.00		3,533.33	3,531.27	15.60	7.54	173.00	-82.33	-175.28	816.83	801.61	15.22	53.652		
3,800.00		3,613.81	3,611.67	16.64	7.74	173.15	-85.35	-177.09	868.49	852.72	15.76	55.093		
3,900.00	3,723.36	3,692.29	3,690.08	17.69	7.90	173.33	-87.76	-179.44	920.74	904.46	16.28	56.562		
4,000.00	3,810.12	3,770.00	3,767.72	18.74	8.06	173.54	-89.53	-182.40	973.64	956.84	16.79	57.973		
4,100.00	-	3,848.39	3,846.02	19.80	8.21	173.76	-90.81	-185.99	1,027.15		17.30	59.368		
4,200.00			3,924.66	20.86	8.35	173.97	-92.15	-190.00	1,081.11		17.80	60.721		
4,300.00		4,005.78	4,003.15	21.92	8.50	174.15	-93.59	-194.40	1,135.51		18.31	62.017		
4,400.00	-	4,089.16	4,086.38	22.99	8.65	174.32	-95.10	-199.26	1,190.11		18.83	63.211		
+,+00.00	4,107.10	4,003.10	4,000.00	22.55	0.00	174.52	-33.10	-133.20	1,130.11	1,17 1.20	10.00	03.211		
4,500.00	4,243.95	4,172.50	4,169.56	24.06	8.81	174.49	-96.50	-204.15	1,244.75	1,225.40	19.35	64.339		
4,600.00			4,254.21	25.14	8.97	174.65	-97.78	-209.12	1,299.38		19.87	65.399		
4,700.00		4,342.95	4,339.71	26.22	9.13	174.82	-98.79	-214.05		1,333.52	20.39	66.395		
4,800.00		4,430.90	4,427.52	27.29	9.29	174.99	-99.54	-218.98	1,408.31		20.92	67.321		
4,900.00		4,523.71	4,520.20	28.37	9.47	175.16	-100.20	-223.73	1,462.30		21.46	68.152		
5,000.00	4,677.78	4,616.69	4,613.08	29.45	9.65	175.31	-100.79	-227.93	1,515.78	1,493.78	22.00	68.910		
5,100.00	4,764.55	4,707.86	4,704.18	30.54	9.83	175.45	-101.41	-231.60	1,568.86	1,546.31	22.55	69.588		
5,200.00	4,851.31	4,799.52	4,795.77	31.62	10.01	175.58	-102.13	-234.90	1,621.59	1,598.49	23.10	70.212		
5,210.58		4,808.83	4,805.08	31.74	10.03	175.59	-102.21	-235.22	1,627.15	1,603.99	23.15	70.274		
5,300.00	4,939.09	4,888.63	4,884.83	32.59	10.20	175.81	-102.83	-237.85	1,672.27	1,648.37	23.91	69.953		
E 465 55	E 000 0 1		4.072.25		4	4=== = .		0:		4 000 50		06.516		
5,400.00		4,980.50	4,976.65	33.37	10.39	176.01	-103.44	-240.72	1,718.26		24.67	69.642		
5,500.00		5,069.42	5,065.53	34.06	10.57	176.17	-103.93	-243.44	1,759.49		25.36	69.375		
5,600.00			5,154.81	34.65	10.76	176.31	-104.30	-246.37	1,796.09		25.97	69.147		
5,700.00				35.15	10.96	176.43	-104.57	-249.72	1,827.86		26.53	68.908		
5,800.00	5,408.69	5,368.54	5,364.51	35.57	11.18	176.53	-104.68	-252.72	1,854.03	1,827.02	27.01	68.639		
5 000 00	E E06 06	5 470 20	5 /66 1F	25.00	11 20	176 61	104.67	254.07	1 974 64	1 947 04	27.40	69 442		
5,900.00			5,466.15	35.90	11.39	176.61	-104.67	-254.97		1,847.21	27.40	68.413		
6,000.00		5,568.99	5,564.91	36.14	11.59	176.66	-104.78	-257.12	1,890.02		27.70	68.228		
6,100.00	-		5,664.32	36.32	11.80	176.69	-104.96	-259.28	1,900.25		27.92	68.060		
6,204.32			5,768.45	36.42	12.02	-92.29	-105.09	-261.55	1,905.36		28.06	67.910		
6,300.00	5,905.68	5,800.00	5,795.86	36.49	12.08	-92.29	-105.11	-262.14	1,908.67	1,880.41	28.26	67.546		
6,400.00	6,005.68	5,800.00	5,795.86	36.56	12.08	-92.29	-105.11	-262.14	1,917.02	1,888.61	28.42	67.465		
6,500.00			5,795.86	36.64	12.08	-92.29 -92.29	-105.11	-262.14	1,930.53		28.57	67.562		
6,600.00			5,795.86	36.73	12.08	-92.29 92.29	-105.11 105.11	-262.14 262.14	1,949.08		28.74	67.829		
6,700.00 6,800.00			5,795.86 5,795.86	36.81 36.89	12.08 12.08	-92.29 -92.29	-105.11 -105.11	-262.14 -262.14	1,972.53		28.90 29.06	68.260 68.846		
0,000.00	0,405.06	5,000.00	J, I JJ.00	30.09	12.00	-52.28	-105.11	-202.14	۵,000.7 I	1,971.65	29.00	00.040		
6,900.00	6,505.68	5,800.00	5,795.86	36.97	12.08	-92.29	-105.11	-262.14	2 033 42	2,004.19	29.23	69.576		



Anticollision Report

TVD Reference:

MD Reference:



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev)

WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 2003.21 Single User Db

Offset D	esign	NBU 9	22-36M F	PAD - CIG	E 221 E	XISTING V	NELL - CIGE	221 EXIS	TING - CI	GE 221	EXISTING	;	Offset Site Error:	0.00 f
urvey Pro Refer	-	-NS-GYRO-M		Semi Major	· Axis				Dista	ınce			Offset Well Error:	0.00 f
leasured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbor +N/-S (ft)	re Centre +E/-W (ft)		Between	Minimum Separation (ft)	Separation Factor	Warning	
7,000.00	6,605.68	5,800.00	5,795.86	37.06	12.08	-92.29	-105.11	-262.14	2,070.45	2,041.06	29.39	70.442		
7,100.00	6,705.68	5,800.00	5,795.86	37.15	12.08	-92.29	-105.11	-262.14	2,111.57	2,082.01	29.56	71.434		
7,200.00	6,805.68	5,800.00	5,795.86	37.24	12.08	-92.29	-105.11	-262.14	2,156.54	2,126.81	29.73	72.541		
7,300.00	6,905.68	5,800.00	5,795.86	37.32	12.08	-92.29	-105.11	-262.14	2,205.14	2,175.24	29.90	73.753		
7,400.00	7,005.68	5,800.00	5,795.86	37.41	12.08	-92.29	-105.11	-262.14	2,257.12	2,227.05	30.07	75.062		
7,500.00	7,105.68	5,800.00	5,795.86	37.51	12.08	-92.29	-105.11	-262.14	2,312.26	2,282.02	30.24	76.457		
7,600.00	7,205.68	5,800.00	5,795.86	37.60	12.08	-92.29	-105.11	-262.14	2,370.34	2,339.93	30.42	77.930		
7,700.00	7,305.68	5,800.00	5,795.86	37.69	12.08	-92.29	-105.11	-262.14	2,431.15	2,400.56	30.59	79.473		
7,800.00	7,405.68	5,800.00	5,795.86	37.79	12.08	-92.29	-105.11	-262.14	2,494.48	2,463.72	30.77	81.077		
7,900.00	7,505.68	5,800.00	5,795.86	37.88	12.08	-92.29	-105.11	-262.14	2,560.16	2,529.22	30.94	82.736		
8,000.00	7,605.68	5,800.00	5,795.86	37.98	12.08	-92.29	-105.11	-262.14	2,628.00	2,596.88	31.12	84.443		
8,100.00	7,705.68	5,800.00	5,795.86	38.08	12.08	-92.29	-105.11	-262.14	2,697.84	2,666.54	31.30	86.192		
8,200.00	7,805.68	5,800.00	5,795.86	38.18	12.08	-92.29	-105.11	-262.14	2,769.53	2,738.05	31.48	87.977		
8,300.00	7,905.68	5,800.00	5,795.86	38.28	12.08	-92.29	-105.11	-262.14	2,842.93	2,811.27	31.66	89.794		
8,400.00	8,005.68	5,800.00	5,795.86	38.38	12.08	-92.29	-105.11	-262.14	2,917.92	2,886.07	31.84	91.636		
8,500.00	8,105.68	5,800.00	5,795.86	38.48	12.08	-92.29	-105.11	-262.14	2,994.36	2,962.34	32.02	93.501		
8,600.00	8,205.68	5,800.00	5,795.86	38.58	12.08	-92.29	-105.11	-262.14	3,072.16	3,039.95	32.21	95.384		
8,700.00	8,305.68	5,800.00	5,795.86	38.69	12.08	-92.29	-105.11	-262.14	3,151.21	3,118.82	32.39	97.282		
8,800.00	8,405.68	5,800.00	5,795.86	38.79	12.08	-92.29	-105.11	-262.14	3,231.42	3,198.84	32.58	99.192		
8,900.00	8,505.68	5,800.00	5,795.86	38.90	12.08	-92.29	-105.11	-262.14	3,312.71	3,279.95	32.76	101.111		
8,994.32	8,600.00	5,800.00	5,795.86	39.00	12.08	-92.29	-105.11	-262.14	3,390.30	3,357.36	32.94	102.926		



Anticollision Report

TVD Reference:

MD Reference:



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 2003.21 Single User Db

	gram: 0-N												Offset Well Error:	0.00 ft
Refer easured Depth	ence Vertical Depth	Offs Measured Depth	et Vertical Depth	Semi Major Reference	Axis Offset	Highside Toolface	Offset Wellbor	re Centre +E/-W	Dista Between Centres	Between	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	. 2010.		
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-58.83	58.83					
100.00	100.00	100.00	100.00	0.09	0.09	-90.00	0.00	-58.83	58.83	58.65	0.18	319.201		
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-58.83	58.83	58.20	0.63	92.817		
300.00	300.00	300.00	300.00	0.54	0.54	-90.00	0.00	-58.83	58.83	57.75	1.08	54.304		
400.00	400.00	400.00	400.00	0.77	0.77	-90.00	0.00	-58.83	58.83	57.30	1.53	38.379		
500.00	500.00	500.00	500.00	0.99	0.99	-90.00	0.00	-58.83	58.83	56.85	1.98	29.676		
600.00	600.00	600.00	600.00	1.22	1.22	-90.00	0.00	-58.83	58.83	56.40	2.43	24.191		
700.00	700.00	700.00	700.00	1.44	1.44	-90.00	0.00	-58.83	58.83	55.95	2.88	20.417		
800.00	800.00	800.00	800.00	1.67	1.67	-90.00	0.00	-58.83	58.83	55.50	3.33	17.662		
900.00	900.00	900.00	900.00	1.89	1.89	-90.00	0.00	-58.83	58.83	55.05	3.78	15.562		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.00	0.00	-58.83	58.83	54.60	4.23	13.908		
1 100 00	1 100 00	1 100 00	1 100 00	2.24	2.24	00.00	0.00	E0.00	E0 00	E4.1E	4.00	10.570		
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34 2.56	-90.00	0.00	-58.83	58.83	54.15 53.70	4.68 5.13	12.572		
1,200.00 1,300.00	1,200.00 1,300.00	1,200.00 1,300.00	1,200.00 1,300.00	2.56 2.79	2.56	-90.00 -90.00	0.00 0.00	-58.83 -58.83	58.83 58.83	53.70 53.25	5.13	11.470 10.546		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.00 -90.00	0.00	-58.83	58.83	52.80	6.03	9.759		
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-90.00	0.00	-58.83	58.83	52.35	6.48	9.082		
,,,,,,,,,,	.,200.00	.,200.00	.,	V.=-	J r	-0.00	0.00	33.50	55.50	32.30	5.70	J.00E		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.00	0.00	-58.83	58.83	51.90	6.93	8.493		
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-90.00	0.00	-58.83	58.83	51.45	7.38	7.975		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.00	0.00	-58.83	58.83	51.01	7.83	7.517		
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	-90.00	0.00	-58.83	58.83	50.56	8.28	7.109		
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.00	0.00	-58.83	58.83	50.11	8.73	6.743 (CC, ES, SF	
2,100.00	2,099.94	2,099.94	2,099.94	4.57	4.59	179.03	0.00	-58.83	61.88	52.74	9.15	6.765		
2,200.00	2,199.50	2,199.35	2,199.31	4.78	4.81	-178.75	2.58	-58.87	71.12	61.60	9.53	7.467		
2,300.00	2,298.32	2,297.45	2,297.10	5.01	5.04	-173.85	10.19	-58.97	87.04	77.17	9.87	8.816		
2,400.00	2,396.03	2,393.35	2,392.20	5.27	5.26	-168.36	22.48	-59.13	110.32	100.11	10.20	10.814		
2,500.00	2,492.26	2,486.27	2,483.64	5.59	5.48	-163.39	38.92	-59.35	141.24	130.71	10.53	13.417		
2,600.00	2,586.66	2,575.52	2,570.63	5.99	5.72	-159.22	58.89	-59.62	179.69	168.82	10.87	16.532		
2,700.00	2,678.86	2,660.57	2,652.56	6.50	5.98	-155.77	81.67	-59.92	225.31	214.06	11.25	20.035		
2,800.00	2,768.54	2,740.99	2,729.02	7.13	6.27	-152.83	106.55	-60.25	277.62	265.94	11.67	23.784		
2,851.78	2,813.86	2,780.70	2,766.38	7.52	6.42	-151.46	120.01	-60.43	307.16	295.23	11.92	25.760		
2,900.00	2,855.70	2,816.79	2,800.08	7.90	6.57	-150.79	132.92	-60.60	335.60	323.33	12.26	27.366		
3,000.00	2,942.47	2,889.83	2,867.51	8.75	6.91	-149.37	160.99	-60.98	395.73	382.71	13.02	30.396		
3,100.00	3,029.23	2,960.40	2,931.59	9.65	7.29	-147.96	190.53	-61.37	457.45	443.60	13.85	33.028		
3,200.00	3,116.00	3,029.84	2,993.54	10.59	7.68	-146.56	221.90	-61.79	520.76	506.02	14.74	35.322		
3,300.00	3,202.76	3,104.18	3,059.24	11.56	8.16	-145.22	256.67	-62.25	584.98	569.26	15.72	37.217		
3,400.00		3,180.15	3,126.38	12.55	8.67	-144.11	292.21	-62.72	649.37	632.63	16.74	38.799		
3 500 00	3 376 30	3 256 11	3 103 53	12 55	9.21	-143 20	227 7F	-es su	712 97	696.09	17 70	40 144		
3,500.00 3,600.00	3,376.30 3,463.06	3,256.11 3,332.07	3,193.52 3,260.65	13.55 14.57	9.21	-143.20 -142.44	327.75 363.28	-63.20 -63.67	713.87 778.46	759.61	17.78 18.85	40.144 41.292		
3,700.00	3,549.83	3,408.03	3,327.79	15.60	10.32	-142. 44 -141.80	398.82	-63.67 -64.14	843.12	823.18	19.94	42.278		
3,800.00		3,484.00	3,394.92	16.64	10.32	-141.24	434.36	-64.62	907.84	886.79	21.05	43.124		
3,900.00				17.69	11.50	-140.76	469.89	-65.09	972.60	950.42		43.857		
4 000 00	2 040 40	2 625 00	2 520 40	40.74	10.10	140.24	E0E 40	ee ee	1 007 00	1 014 07	00.04	44 407		
4,000.00 4,100.00	3,810.12 3,896.89	3,635.92 3,711.88	3,529.19 3,596.33	18.74 19.80	12.10 12.71	-140.34 -139.97	505.43 540.96	-65.56 -66.04	1,037.39 1,102.21		23.31 24.46	44.497 45.059		
4,200.00			3,596.33	20.86	13.33	-139.97 -139.64	540.96 577.11	-66.52	1,102.21		25.62	45.059 45.544		
4,300.00			3,764.24	21.92	14.05	-139.04	626.55	-67.18	1,107.03		26.86	45.827		
4,400.00		4,017.13	3,871.27	22.99	14.05	-139.36	673.18	-67.80	1,292.16		28.05	46.062		
4,500.00		4,139.19	3,985.53	24.06	15.43	-139.63	716.03	-68.37		1,321.92	29.21	46.260		
4,600.00		4,266.17	4,106.66	25.14	16.06	-140.15	754.10	-68.88	1,407.52		30.30	46.446		
4,700.00		4,397.57	4,234.02	26.22	16.64	-140.91	786.37	-69.31	1,461.24		31.33	46.643		
4,800.00 4,900.00		4,532.72 4,670.79	4,366.71 4,503.59	27.29 28.37	17.12 17.51	-141.88 -143.05	811.88 829.83	-69.65 -69.88	1,512.23 1,560.48	1,479.98 1,527.42	32.25 33.06	46.890 47.197		
7,500.00	÷,581.02	4,070.79	+,505.58	20.37	17.51	-143.03	029.03	-09.00	1,500.40	1,521.42	33.00	71.181		
5,000.00	4,677.78	4,810.86	4,643.30	29.45	17.79	-144.41	839.59	-70.01	1,606.05	1,572.31	33.75	47.590		



Anticollision Report

TVD Reference:

MD Reference:



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 2003.21 Single User Db

	gram: 0-M	IWD					3U 922-36L3I						Offset Well Error:	0.00 f
Refer		Offs		Semi Major					Dista					
leasured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbor +N/-S (ft)	re Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,100.00	4,764.55	4,932.13	4,764.55	30.54	17.95	-145.70	841.34	-70.04	1,649.23	1,614.91	34.33	48.047		
5,200.00	4,851.31	5,018.90	4,851.31	31.62	18.05	-146.62	841.34	-70.04	1,692.21	1,657.30	34.91	48.473		
5,210.58	4,860.49	5,028.08	4,860.49	31.74	18.06	-146.71	841.34	-70.04	1,696.77		34.97	48.518		
5,300.00	4,939.09	5,106.68	4,939.09	32.59	18.16	-148.11	841.34	-70.04	1,733.94	1,698.29	35.65	48.640		
5,400.00	5,029.24	5,196.83	5,029.24	33.37	18.28	-149.46	841.34	-70.04	1,771.90	1,735.58	36.32	48.785		
5,500.00	5,121.53	5,289.12	5,121.53	34.06	18.39	-150.61	841.34	-70.04	1,805.87		36.94	48.891		
5,600.00	5,215.71	5,383.29	5,215.71	34.65	18.51	-151.56	841.34	-70.04	1,835.67	1,798.17	37.49	48.960		
5,700.00	5,311.52	5,479.10	5,311.52	35.15	18.64	-152.35	841.34	-70.04	1,861.16	1,823.17	37.99	48.996		
5,800.00	5,408.69	5,576.27	5,408.69	35.57	18.77	-152.98	841.34	-70.04	1,882.21		38.41	49.000		
5,900.00	5,506.96	5,674.55	5,506.96	35.90	18.90	-153.45	841.34	-70.04	1,898.74	1,859.96	38.77	48.971		
6,000.00	5,606.07	5,773.65	5,606.07	36.14	19.04	-153.79	841.34	-70.04	1,910.65		39.06	48.910		
6,100.00	5,705.73	5,873.31	5,705.73	36.32	19.17	-153.99	841.34	-70.04	1,917.90	1,878.61	39.29	48.814		
6,204.32	5,810.00	5,977.58	5,810.00	36.42	19.32	-63.05	841.34	-70.04	1,920.46	1,881.01	39.45	48.675		
6,300.00	5,905.68	6,073.26	5,905.68	36.49	19.45	-63.05	841.34	-70.04	1,920.46	1,880.76	39.71	48.367		
6,400.00	6,005.68	6,173.26	6,005.68	36.56	19.60	-63.05	841.34	-70.04	1,920.46	1,880.49	39.98	48.037		
6,500.00	6,105.68	6,273.26	6,105.68	36.64	19.74	-63.05	841.34	-70.04	1,920.46	1,880.21	40.25	47.708		
6,600.00	6,205.68	6,373.26	6,205.68	36.73	19.89	-63.05	841.34	-70.04	1,920.46	1,879.93	40.53	47.379		
6,700.00	6,305.68	6,473.26	6,305.68	36.81	20.03	-63.05	841.34	-70.04	1,920.46	1,879.65	40.82	47.052		
6,800.00	6,405.68	6,573.26	6,405.68	36.89	20.18	-63.05	841.34	-70.04	1,920.46	1,879.36	41.10	46.725		
6,900.00	6,505.68	6,673.26	6,505.68	36.97	20.33	-63.05	841.34	-70.04	1,920.46	1,879.08	41.39	46.400		
7,000.00	6,605.68	6,773.26	6,605.68	37.06	20.48	-63.05	841.34	-70.04	1,920.46	1,878.78	41.68	46.076		
7,100.00	6,705.68	6,873.26	6,705.68	37.15	20.64	-63.05	841.34	-70.04	1,920.46	1,878.49	41.97	45.754		
7,200.00	6,805.68	6,973.26	6,805.68	37.24	20.79	-63.05	841.34	-70.04	1,920.46	1,878.19	42.27	45.434		
7,300.00	6,905.68	7,073.26	6,905.68	37.32	20.95	-63.05	841.34	-70.04	1,920.46	1,877.90	42.57	45.114		
7,400.00	7,005.68	7,173.26	7,005.68	37.41	21.10	-63.05	841.34	-70.04	1,920.46	1,877.59	42.87	44.797		
7,500.00	7,105.68	7,273.26	7,105.68	37.51	21.26	-63.05	841.34	-70.04	1,920.46	1,877.29	43.17	44.482		
7,600.00	7,205.68	7,373.26	7,205.68	37.60	21.42	-63.05	841.34	-70.04	1,920.46	1,876.98	43.48	44.168		
7,700.00	7,305.68	7,473.26	7,305.68	37.69	21.58	-63.05	841.34	-70.04	1,920.46	1,876.67	43.79	43.856		
7,800.00	7,405.68	7,573.26	7,405.68	37.79	21.74	-63.05	841.34	-70.04	1,920.46	1,876.36	44.10	43.547		
7,900.00	7,505.68	7,673.26	7,505.68	37.88	21.90	-63.05	841.34	-70.04	1,920.46	1,876.05	44.41	43.239		
8,000.00	7,605.68	7,773.26	7,605.68	37.98	22.07	-63.05	841.34	-70.04	1,920.46	1,875.73	44.73	42.934		
8,100.00	7,705.68	7,873.26	7,705.68	38.08	22.23	-63.05	841.34	-70.04	1,920.46	1,875.41	45.05	42.630		
8,200.00	7,805.68	7,973.26	7,805.68	38.18	22.40	-63.05	841.34	-70.04	1,920.46	1,875.09	45.37	42.329		
8,300.00	7,905.68	8,073.26	7,905.68	38.28	22.56	-63.05	841.34	-70.04	1,920.46	1,874.77	45.69	42.030		
8,400.00	8,005.68	8,173.26	8,005.68	38.38	22.73	-63.05	841.34	-70.04	1,920.46	1,874.45	46.02	41.734		
8,500.00	8,105.68	8,273.26	8,105.68	38.48	22.90	-63.05	841.34	-70.04	1,920.46	1,874.12	46.34	41.440		
8,600.00	8,205.68	8,373.26	8,205.68	38.58	23.07	-63.05	841.34	-70.04	1,920.46	1,873.79	46.67	41.148		
8,700.00	8,305.68	8,473.26	8,305.68	38.69	23.24	-63.05	841.34	-70.04	1,920.46	1,873.46	47.00	40.858		
8,800.00	8,405.68	8,573.26	8,405.68	38.79	23.41	-63.05	841.34	-70.04	1,920.46	1,873.13	47.34	40.571		
8,900.00	8,505.68	8,673.26	8,505.68	38.90	23.58	-63.05	841.34	-70.04	1,920.46	1,872.79	47.67	40.286		
8,994.32		8,767.58	8,600.00	39.00	23.74	-63.05	841.34	-70.04	1,920.46	1,872.48	47.99	40.020		



Anticollision Report



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS

TVD Reference: WELL @ 4984.00ft (Original Well Elev)
MD Reference: WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 2003.21 Single User Db

	gram: 0-M												Offset Well Error:	0.00 ft
Refer leasured Depth	Vertical Depth	Offsom Measured Depth	Vertical Depth	Semi Major Reference	Offset	Highside Toolface	Offset Wellbor	re Centre +E/-W	Dista Between Centres	Between Ellipses	Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-39.22	39.22					
100.00	100.00	100.00	100.00	0.09	0.09	-90.00	0.00	-39.22	39.22	39.03	0.18	212.790		
200.00	200.00 300.00	200.00 300.00	200.00 300.00	0.32	0.32	-90.00	0.00	-39.22 -39.22	39.22	38.59	0.63	61.875		
300.00 400.00	400.00	400.00	400.00	0.54 0.77	0.54 0.77	-90.00 -90.00	0.00 0.00	-39.22	39.22 39.22		1.08 1.53	36.201 25.585		
500.00	500.00	500.00	500.00	0.77	0.77	-90.00	0.00	-39.22	39.22		1.98	19.783		
000.00	000.00	000.00	000.00	0.00	0.00	00.00	0.00	00.22	00.22	07.24	1.00	10.700		
600.00	600.00	600.00	600.00	1.22	1.22	-90.00	0.00	-39.22	39.22	36.79	2.43	16.126		
700.00	700.00	700.00	700.00	1.44	1.44	-90.00	0.00	-39.22	39.22	36.34	2.88	13.611		
800.00	800.00	800.00	800.00	1.67	1.67	-90.00	0.00	-39.22	39.22		3.33	11.774		
900.00	900.00	900.00	900.00	1.89	1.89	-90.00	0.00	-39.22	39.22	35.44	3.78	10.374		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.00	0.00	-39.22	39.22	34.99	4.23	9.271		
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.00	0.00	-39.22	39.22	34.54	4.68	8.381		
1,200.00	1,200.00	1,200.00	1,200.00	2.54	2.56	-90.00	0.00	-39.22	39.22	34.09	5.13	7.646		
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.00	0.00	-39.22	39.22		5.58	7.030		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.00	0.00	-39.22	39.22		6.03	6.506		
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-90.00	0.00	-39.22	39.22	32.74	6.48	6.054		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.00	0.00	-39.22	39.22	32.29	6.93	5.662		
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-90.00	0.00	-39.22	39.22		7.38	5.317		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.00	0.00	-39.22	39.22	31.39	7.83	5.011		
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	-90.00	0.00	-39.22	39.22		8.28	4.739	20 50 05	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.00	0.00	-39.22	39.22	30.49	8.73	4.495 (CC, ES, SF	
2,100.00	2,099.94	2,099.94	2,099.94	4.57	4.59	179.05	0.00	-39.22	42.27	33.12	9.15	4.621		
2,200.00	2,199.50	2,200.47	2,200.40	4.78	4.81	-177.48	2.89	-38.14	50.45	40.92	9.53	5.296		
2,300.00	2,298.32	2,300.12	2,299.62	5.01	5.04	-170.06	11.45	-34.95	63.51	53.63	9.88	6.431		
2,400.00	2,396.03	2,398.19	2,396.54	5.27	5.27	-162.03	25.38	-29.77	82.66	72.44	10.22	8.085		
2,500.00	2,492.26	2,494.01	2,490.22	5.59	5.51	-155.03	44.22	-22.75	108.55	97.94	10.61	10.233		
2,600.00	2,586.66	2,587.04	2,579.88	5.99	5.78	-149.37	67.39	-14.12	141.20	130.15	11.06	12.770		
2,700.00	2,678.86	2,676.79	2,664.93	6.50	6.10	-144.83	94.24	-4.12	180.34	168.74	11.60	15.545		
2,800.00	2,768.54	2,762.92	2,744.95	7.13	6.46	-141.10	124.07	6.99	225.56	213.30	12.27	18.389		
2,851.78	2,813.86	2,806.01	2,784.32	7.52	6.65	-139.39	140.47	13.10	251.22	238.57	12.66	19.849		
2,900.00	2,855.70	2,845.39	2,819.90	7.90	6.86	-138.48	156.30	19.00	275.97	262.85	13.12	21.036		
3,000.00	2,942.47	2,925.40	2,890.87	8.75	7.31	-136.47	190.90	31.88	328.43	314.28	14.15	23.207		
3,100.00	3,029.23	3,008.88	2,963.82	9.65	7.85	-134.55	228.92	46.05	381.95	366.64	15.31	24.948		
3,200.00	3,116.00	3,092.74	3,037.10	10.59	8.43	-133.08	267.13	60.28	435.71	419.18	16.52	26.369		
3,300.00	3,202.76	3,176.59	3,110.38	11.56	9.04	-131.94	305.33	74.51	489.63	471.84	17.78	27.533		
3,400.00	3,289.53	3,260.45	3,183.66	12.55	9.67	-131.02	343.53	88.73	543.66	524.58	19.08	28.494		
3,500.00	3,376.30	3,344.30	3,256.94	13.55	10.32	-130.26	381.74	102.96	597.77	577.36	20.41	29.293		
3,600.00	3,463.06	3,428.16	3,330.22	14.57	10.32	-130.20	419.94	117.19	651.94	630.18	21.76	29.293		
3,700.00	3,549.83	3,512.02	3,403.50	15.60	11.67	-129.10	458.14	131.42	706.16	683.03	23.13	30.529		
3,800.00	3,636.59	3,595.87	3,476.78	16.64	12.37	-128.64	496.35	145.65	760.42	735.90	24.52	31.010		
3,900.00				17.69	13.07	-128.25	534.55	159.88	814.71		25.93	31.422		
4,000.00	3,810.12	3,763.58	3,623.34	18.74	13.78	-127.90	572.75	174.11	869.02	841.67	27.35	31.777		
4,100.00		3,847.44	3,696.62	19.80	14.50	-127.59	610.95	188.34	923.35	894.57	28.78	32.086		
4,200.00		3,931.30	3,769.90	20.86	15.23	-127.32	649.16	202.57	977.70	947.48	30.22	32.357		
4,300.00				21.92	15.96	-127.08	687.36	216.80	1,032.06		31.66	32.594		
4,400.00	4,157.19	4,099.01	3,916.46	22.99	16.69	-126.86	725.56	231.03	1,086.44	1,053.32	33.12	32.804		
4,500.00	4,243.95	4,182.86	3,989.74	24.06	17.43	-126.66	763.77	245.26	1,140.82	1,106.24	34.58	32.990		
4,600.00		4,266.72	4,063.02	25.14	18.17	-126.48	801.97	259.48	1,195.21		36.05	33.156		
4,700.00		4,350.58	4,136.30	26.22	18.92	-126.31	840.17	273.71	1,249.62	1,212.10	37.52	33.305		
4,800.00	4,504.25	4,434.43	4,209.58	27.29	19.66	-126.16	878.37	287.94		1,265.03	39.00	33.439		
4,900.00	4,591.02	4,518.29	4,282.86	28.37	20.41	-126.02	916.58	302.17	1,358.44	1,317.96	40.48	33.560		
E 000 00	4,677.78	4,602.14	4,356.14	29.45	21.16	-125.89	954.78	316.40	1 412 86	1,370.89	41.96	33.670		



Anticollision Report

TVD Reference:

MD Reference:



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)
Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev)

WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 2003.21 Single User Db

	gram: 0-M												Offset Well Error:	0.00 f
Refere		Offs		Semi Major					Dista					
Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbor +N/-S	+E/-W	Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
5,100.00	4,764.55	4,686.00	4,429.42	30.54	21.92	-125.77	992.98	330.63	1,467.28	1,423.83	43.45	33.770		
5,200.00	4,851.31	4,769.86	4,502.70	31.62	22.67	-125.66	1,031.19	344.86	1,521.71	1,476.77	44.94	33.861		
5,210.58	4,860.49	4,778.73	4,510.45	31.74	22.75	-125.65	1,035.23	346.36	1,527.46	1,482.37	45.10	33.870		
5,300.00	4,939.09	4,854.30	4,576.49	32.59	23.44	-126.85	1,069.66	359.19	1,575.10	1,528.64	46.46	33.902		
5,400.00	5,029.24	4,940.07	4,651.44	33.37	24.21	-127.92	1,108.73	373.74	1,625.85	1,577.96	47.89	33.947		
5,500.00	5,121.53	5,026.94	4,727.35	34.06	25.00	-128.74	1,148.31	388.48	1,673.87	1,624.59	49.29	33.961		
5,600.00	5,215.71	5,166.93	4,851.40	34.65	26.04	-129.06	1,209.06	411.11	1,718.12	1,667.24	50.88	33.770		
5,700.00	5,311.52	5,334.01	5,005.10	35.15	27.04	-129.26	1,270.32	433.93	1,755.80	1,703.44	52.36	33.530		
5,800.00	5,408.69	5,510.86	5,173.34	35.57	27.92	-129.47	1,321.19	452.87	1,786.25	1,732.59	53.66	33.288		
5,900.00	5,506.96	5,695.57	5,353.64	35.90	28.62	-129.74	1,358.51	466.78	1,808.94	1,754.24	54.70	33.071		
6,000.00	5,606.07	5,885.54	5,542.18	36.14	29.08	-130.07	1,379.70	474.67	1,823.50	1,768.08	55.42	32.901		
0.400.00	F 70F 70	0.040.00	E 70E 70	00.00	00.00	400.40	4 004 00	470.00	4 000 04	4 774 10	FF 0.4	00.700		
6,100.00	5,705.73	6,049.20	5,705.73	36.32	29.28	-130.42	1,384.03	476.28	1,829.94	1,774.13	55.81	32.788		
6,204.32	5,810.00	6,153.47	5,810.00	36.42	29.37	-39.52	1,384.03	476.28	1,831.79	1,775.76	56.02	32.697		
6,300.00	5,905.68	6,249.15	5,905.68	36.49	29.46	-39.52	1,384.03	476.28	1,831.79	1,775.59	56.20	32.594		
6,400.00	6,005.68	6,349.15	6,005.68	36.56	29.55	-39.52	1,384.03	476.28	1,831.79	1,775.39	56.39	32.482		
6,500.00	6,105.68	6,449.15	6,105.68	36.64	29.64	-39.52	1,384.03	476.28	1,831.79	1,775.19	56.59	32.368		
6,600.00	6,205.68	6,549.15	6,205.68	36.73	29.74	-39.52	1,384.03	476.28	1,831.79	1,774.99	56.79	32.254		
6,700.00	6,305.68	6,649.15	6,305.68	36.81	29.83	-39.52	1,384.03	476.28	1,831.79	1,774.79	57.00	32.139		
6,800.00	6,405.68	6,749.15	6,405.68	36.89	29.93	-39.52	1,384.03	476.28	1,831.79	1,774.58	57.20	32.023		
6,900.00	6,505.68	6,849.15	6,505.68	36.97	30.03	-39.52	1,384.03	476.28	1,831.79	1,774.37	57.41	31.906		
7,000.00	6,605.68	6,949.15	6,605.68	37.06	30.13	-39.52	1,384.03	476.28	1,831.79	1,774.16	57.62	31.789		
7,100.00	6,705.68	7,049.15	6,705.68	37.15	30.23	-39.52	1,384.03	476.28	1,831.79	1,773.95	57.84	31.671		
7,200.00	6,805.68	7,149.15	6,805.68	37.24	30.33	-39.52	1,384.03	476.28	1,831.79	1,773.73	58.06	31.553		
7,300.00	6,905.68	7,249.15	6,905.68	37.32	30.44	-39.52	1,384.03	476.28	1,831.79	1,773.51	58.27	31.434		
7,400.00	7,005.68	7,349.15	7,005.68	37.41	30.54	-39.52	1,384.03	476.28	1,831.79	1,773.29	58.50	31.314		
7,500.00	7,105.68	7,449.15	7,105.68	37.51	30.65	-39.52	1,384.03	476.28	1,831.79	1,773.25	58.72	31.194		
•	·	,							•					
7,600.00	7,205.68	7,549.15	7,205.68	37.60	30.76	-39.52	1,384.03	476.28	1,831.79	1,772.84	58.95	31.073		
7,700.00	7,305.68	7,649.15	7,305.68	37.69	30.87	-39.52	1,384.03	476.28	1,831.79	1,772.61	59.18	30.953		
7,800.00	7,405.68	7,749.15	7,405.68	37.79	30.98	-39.52	1,384.03	476.28	1,831.79	1,772.37	59.41	30.831		
7,900.00	7,505.68	7,849.15	7,505.68	37.88	31.09	-39.52	1,384.03	476.28	1,831.79	1,772.14	59.65	30.710		
8,000.00	7,605.68	7,949.15	7,605.68	37.98	31.20	-39.52	1,384.03	476.28	1,831.79	1,771.90	59.89	30.588		
8,100.00	7,705.68	8,049.15	7,705.68	38.08	31.32	-39.52	1,384.03	476.28	1,831.79	1,771.66	60.13	30.466		
8,200.00	7,805.68	8,149.15	7,805.68	38.18	31.43	-39.52	1,384.03	476.28	1,831.79	1,771.42	60.37	30.343		
8,300.00	7,905.68	8,249.15	7,905.68	38.28	31.55	-39.52	1,384.03	476.28	1,831.79	1,771.17	60.61	30.221		
8,400.00	8,005.68	8,349.15	8,005.68	38.38	31.67	-39.52	1,384.03	476.28	1,831.79	1,770.93	60.86	30.098		
8,500.00	8,105.68	8,449.15	8,105.68	38.48	31.79	-39.52	1,384.03	476.28	1,831.79	1,770.68	61.11	29.975		
8,600.00	8,205.68	8,549.15	8,205.68	38.58	31.91	-39.52	1,384.03	476.28	1,831.79	1,770.42	61.36	29.852		
8,700.00	8,305.68	8,649.15	8,305.68	38.69	32.03	-39.52	1,384.03	476.28	1,831.79	1,770.42	61.62	29.729		
8,800.00	8,405.68	8,749.15	8,405.68	38.79	32.03	-39.52 -39.52	1,384.03	476.28	1,831.79	1,770.17	61.87	29.729		
			8,505.68							,	62.13			
8,900.00	8,505.68 8,600.00	8,849.15	8,600.00	38.90 39.00	32.27 32.39	-39.52 -39.52	1,384.03 1,384.03	476.28 476.28	1,831.79 1,831.79	1,769.66 1,769.41	62.13	29.483		



Anticollision Report

TVD Reference:

MD Reference:



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

ence: Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev)

WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 2003.21 Single User Db

urvev Pro	gram: 0-N	IWD											Offset Well Error:	0.00 ft
Refer	ence	Offs		Semi Major		III abalda	0#4 \#-!!!-		Dista			0		0.0010
Depth (ft)	Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbo +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-19.61	19.61					
100.00	100.00	100.00	100.00	0.09	0.09	-90.00	0.00	-19.61	19.61	19.43	0.18	106.411		
200.00	200.00	200.00	200.00	0.32	0.32	-90.00	0.00	-19.61	19.61	18.98	0.63	30.942		
300.00	300.00	300.00	300.00	0.54	0.54	-90.00	0.00	-19.61	19.61	18.53	1.08	18.103		
400.00	400.00	400.00	400.00	0.77	0.77	-90.00	0.00	-19.61	19.61	18.08	1.53	12.794		
500.00	500.00	500.00	500.00	0.99	0.99	-90.00	0.00	-19.61	19.61	17.63	1.98	9.893		
600.00	600.00	600.00	600.00	1.22	1.22	-90.00	0.00	-19.61	19.61	17.18	2.43	8.064		
700.00	700.00	700.00	700.00	1.44	1.44	-90.00	0.00	-19.61	19.61	16.73	2.88	6.806		
800.00	800.00	800.00	800.00	1.67	1.67	-90.00	0.00	-19.61	19.61	16.28	3.33	5.888		
900.00	900.00	900.00	900.00	1.89	1.89	-90.00	0.00	-19.61	19.61	15.83	3.78	5.188		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	-90.00	0.00	-19.61	19.61	15.38	4.23	4.636		
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	-90.00	0.00	-19.61	19.61	14.93	4.68	4.191		
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.00	0.00	-19.61	19.61	14.48	5.13	3.824		
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	-90.00	0.00	-19.61	19.61	14.03	5.58	3.516		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.00	0.00	-19.61	19.61	13.58	6.03	3.253		
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	-90.00	0.00	-19.61	19.61	13.13	6.48	3.028		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.00	0.00	-19.61	19.61	12.69	6.93	2.831		
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	-90.00	0.00	-19.61	19.61	12.24	7.38	2.659		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.00	0.00	-19.61	19.61	11.79	7.83	2.506		
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	-90.00	0.00	-19.61	19.61	11.34	8.28	2.370		
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.00	0.00	-19.61	19.61	10.89	8.73	2.248 (CC, ES, SF	
2,100.00	2,099.94	2,100.69	2,100.67	4.57	4.58	179.78	0.24	-17.86	20.93	11.79	9.14	2.291		
2,200.00	2,199.50	2,201.39	2,201.22	4.78	4.78	-178.34	0.94	-12.60	24.89	15.39	9.49	2.622		
2,300.00	2,298.32	2,301.50	2,301.00	5.01	5.00	-176.48	2.04	-4.46	32.08	22.26	9.82	3.267		
2,400.00	2,396.03	2,400.64	2,399.78	5.27	5.22	-175.83	3.16	3.92	45.04	34.92	10.12	4.450		
2,500.00	2,492.26	2,498.81	2,497.59	5.59	5.44	-175.87	4.28	12.21	64.01	53.61	10.40	6.156		
2,600.00	2,586.66	2,595.64	2,594.06	5.99	5.66	-176.15	5.38	20.40	88.93	78.28	10.65	8.353		
2,700.00	2,678.86	2,690.77	2,688.85	6.50	5.88	-176.46	6.46	28.44	119.70	108.83	10.87	11.016		
2,800.00	2,768.54	2,783.84	2,781.58	7.13	6.10	-176.74	7.52	36.30	156.21	145.15	11.06	14.119		
2,851.78	2,813.86	2,831.12	2,828.68	7.52	6.21	-176.87	8.06	40.30	177.33	166.18	11.16	15.895		
2,900.00	2,855.70	2,873.65	2,871.07	7.90	6.30	-177.02	8.53	43.79	197.80	186.43	11.37	17.394		
3,000.00	2,942.47	2,960.45	2,957.65	8.75	6.48	-177.29	9.36	49.96	241.25	229.43	11.82	20.407		
3,100.00	3,029.23	3,046.00	3,043.06	9.65	6.66	-177.53	10.00	54.76	286.02	273.74	12.28	23.288		
3,200.00	3,116.00	3,130.28	3,127.26	10.59	6.83	-177.76	10.47	58.26	332.10	319.34	12.75	26.042		
3,300.00	3,202.76	3,213.29	3,210.24	11.56	6.99	-177.96	10.77	60.50	379.44	366.21	13.23	28.680		
3,400.00	3,289.53	3,295.01	3,291.96	12.55	7.15	-178.15	10.91	61.54	428.03	414.32	13.71	31.211		
3,500.00	3,376.30	3,379.35	3,376.30	13.55	7.31	-178.34	10.93	61.64	477.63	463.42	14.21	33.610		
3,600.00	3,463.06	3,466.12	3,463.06	14.57	7.50	-178.50	10.93	61.64	527.33	512.60	14.73	35.804		
3,700.00	3,549.83	3,552.88	3,549.83	15.60	7.69	-178.62	10.93	61.64	577.04	561.78	15.26	37.825		
3,800.00	3,636.59	3,639.65	3,636.59	16.64	7.88	-178.73	10.93	61.64	626.74	610.96	15.79	39.698		
3,900.00	3,723.36	3,726.41	3,723.36	17.69	8.07	-178.83	10.93	61.64	676.45	660.13	16.33	41.435		
4,000.00	3,810.12	3,813.18	3,810.12	18.74	8.26	-178.91	10.93	61.64	726.16	709.29	16.87	43.050		
4,100.00	3,896.89	3,899.95	3,896.89	19.80	8.45	-178.98	10.93	61.64	775.87	758.46	17.41	44.554		
4,200.00	3,983.66	3,986.71	3,983.66	20.86	8.64	-179.04	10.93	61.64	825.58	807.62		45.957		
4,300.00	4,070.42	4,073.48	4,070.42	21.92	8.83	-179.09	10.93	61.64	875.29	856.77	18.52	47.269		
4,400.00	4,157.19	4,160.24	4,157.19	22.99	9.02	-179.14	10.93	61.64	925.00	905.93	19.07	48.496		
4,500.00	4,243.95	4,247.01	4,243.95	24.06	9.21	-179.19	10.93	61.64	974.71	955.08	19.63	49.648		
4,600.00	4,330.72	4,333.78	4,330.72	25.14	9.41	-179.23	10.93	61.64	1,024.43		20.19	50.729		
4,700.00	4,417.49	4,420.54	4,417.49	26.22	9.60	-179.26	10.93	61.64	1,074.14		20.76	51.746		
4,800.00	4,504.25	4,507.31	4,504.25	27.29	9.79	-179.29	10.93	61.64	1,123.85	1,102.53	21.32	52.704		
4,900.00	4,591.02	4,594.07	4,591.02	28.37	9.98	-179.32	10.93	61.64	1,173.57		21.89	53.608		
5,000.00	4,677.78	4,680.84	4,677.78	29.45	10.17	-179.35	10.93	61.64		1,200.82	22.46	54.462		



Anticollision Report

TVD Reference:

MD Reference:



Company: ANADARKO PETROLEUM CORP.

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 2003.21 Single User Db

	gram: 0-M												Offset Well Error:	0.00
Refer		Offs		Semi Major Axis Reference Offset				<u>.</u> .	Dista					
Depth	Depth	Measured Depth	Vertical Depth			Highside Toolface	Offset Wellbor +N/-S	+E/-W	Between Centres	Ellipses	Minimum Separation		Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
5,100.00	4,764.55	4,767.60	4,764.55	30.54	10.37	-179.38	10.93	61.64	1,272.99	1,249.96	23.03	55.270		
5,200.00	4,851.31	4,854.37	4,851.31	31.62	10.56	-179.40	10.93	61.64	1,322.71	1,299.10	23.61	56.035		
5,210.58	4,860.49	4,863.55	4,860.49	31.74	10.58	-179.40	10.93	61.64	1,327.97	1,304.30	23.67	56.113		
5,300.00	4,939.09	4,942.15	4,939.09	32.59	10.75	-179.44	10.93	61.64	1,370.59	1,346.18	24.41	56.143		
5,400.00	5,029.24	5,032.30	5,029.24	33.37	10.95	-179.47	10.93	61.64	1,413.84	1,388.66	25.17	56.161		
5,500.00	5,121.53	5,124.59	5,121.53	34.06	11.16	-179.49	10.93	61.64	1,452.31	1,426.44	25.87	56.143		
5,600.00	5,215.71	5,218.77	5,215.71	34.65	11.37	-179.51	10.93	61.64	1,485.90	1,459.41	26.49	56.098		
5,700.00	5,311.52	5,314.57	5,311.52	35.15	11.58	-179.53	10.93	61.64	1,514.51	1,487.48	27.03	56.030		
5,800.00	5,408.69	5,411.75	5,408.69	35.57	11.80	-179.54	10.93	61.64	1,538.07	1,510.58	27.49	55.944		
5,900.00	5,506.96	5,510.02	5,506.96	35.90	12.01	-179.55	10.93	61.64	1,556.52	1,528.64	27.87	55.842		
6,000.00	5,606.07	5,609.12	5,606.07	36.14	12.23	-179.56	10.93	61.64	1,569.79	1,541.62	28.17	55.727		
6,100.00	5,705.73	5,708.79	5,705.73	36.32	12.46	-179.56	10.93	61.64	1,577.86	1,549.48	28.38	55.598		
6,204.32	5,810.00	5,813.06	5,810.00	36.42	12.69	-88.55	10.93	61.64	1,580.71	1,552.21	28.51			
6,300.00	5,905.68	5,908.73	5,905.68	36.49	12.90	-88.55	10.93	61.64	1,580.71	1,551.85	28.86	54.765		
6,400.00	6,005.68	6,008.73	6,005.68	36.56	13.12	-88.55	10.93	61.64	1,580.71	1,551.47	29.25	54.049		
6,500.00	6,105.68	6,108.73	6,105.68	36.64	13.35	-88.55	10.93	61.64	1,580.71	1,551.08	29.63	53.348		
6,600.00	6,205.68	6,208.73	6,205.68	36.73	13.57	-88.55	10.93	61.64	1,580.71	1,550.70	30.02	52.662		
6,700.00	6,305.68	6,308.73	6,305.68	36.81	13.79	-88.55	10.93	61.64	1,580.71	1,550.31	30.40	51.991		
6,800.00	6,405.68	6,408.73	6,405.68	36.89	14.01	-88.55	10.93	61.64	1,580.71	1,549.92	30.79	51.335		
6,900.00	6,505.68	6,508.73	6,505.68	36.97	14.24	-88.55	10.93	61.64	1,580.71	1,549.53	31.18	50.693		
7,000.00	6,605.68	6,608.73	6,605.68	37.06	14.46	-88.55	10.93	61.64	1,580.71	1,549.14	31.57	50.064		
7,100.00	6.705.68	6,708.73	6.705.68	37.15	14.68	-88.55	10.93	61.64	1,580.71	1,548.75	31.97	49.449		
7,200.00	6,805.68	6,808.73	6,805.68	37.24	14.91	-88.55	10.93	61.64		1,548.35	32.36	48.847		
7,300.00	6,905.68	6,908.73	6,905.68	37.32	15.13	-88.55	10.93	61.64	1,580.71		32.76	48.258		
7,400.00	7,005.68	7,008.73	7,005.68	37.41	15.35	-88.55	10.93	61.64		1,547.56	33.15	47.681		
7,500.00	7,105.68	7,108.73	7,105.68	37.51	15.58	-88.55	10.93	61.64		1,547.16	33.55	47.115		
7,600.00	7,205.68	7,208.73	7,205.68	37.60	15.80	-88.55	10.93	61.64	1,580.71	1,546.76	33.95	46.562		
7,700.00	7,305.68	7,308.73	7,305.68	37.69	16.02	-88.55	10.93	61.64	1,580.71		34.35	46.020		
7,800.00	7,405.68	7,408.73	7,405.68	37.79	16.25	-88.55	10.93	61.64		1,545.96	34.75	45.489		
7,900.00	7,505.68	7,508.73	7,505.68	37.88	16.47	-88.55	10.93	61.64	1,580.71		35.15	44.968		
8,000.00	7,605.68	7,608.73	7,605.68	37.98	16.69	-88.55	10.93	61.64	1,580.71		35.55	44.459		
8,100.00	7,705.68	7,708.73	7,705.68	38.08	16.92	-88.55	10.93	61.64	1 580 71	1,544.75	35.96	43.959		
8,200.00	7,805.68	7,808.73	7,705.68	38.18	17.14	-88.55	10.93	61.64	1,580.71		36.36	43.470		
8,300.00	7,905.68	7,908.73	7,905.68	38.28	17.17	-88.55	10.93	61.64	-	1,543.94	36.77	42.990		
8,400.00	8,005.68	8,008.73	8,005.68	38.38	17.59	-88.55	10.93	61.64	1,580.71		37.18	42.519		
8,500.00	8,105.68	8,108.73	8,105.68	38.48	17.81	-88.55	10.93	61.64		1,543.13	37.58	42.058		
8,600.00	8,205.68	8,208.73	8,205.68	38.58	18.04	-88.55	10.93	61.64	1 580 71	1,542.72	37.99	41.606		
8,700.00	8,305.68	8,308.73	8,305.68	38.69	18.26	-88.55	10.93	61.64	1,580.71		38.40	41.162		
8,800.00	8,405.68	8,408.73	8,405.68	38.79	18.48	-88.55	10.93	61.64	1,580.71		38.81	40.727		
8,900.00	8,505.68	8,508.73	8,505.68	38.90	18.71	-88.55	10.93	61.64	-	1,541.49	39.22			
8,994.32	8,600.00	8,603.06	8,600.00	39.00	18.92	-88.55	10.93	61.64	1,580.71		39.22	39.905		



Anticollision Report

TVD Reference:

North Reference:

Output errors are at

MD Reference:

Database:



ANADARKO PETROLEUM CORP. Company:

Project: UINTAH COUNTY, UTAH (nad 27)

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Survey Calculation Method:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev)

WELL @ 4984.00ft (Original Well Elev)

True

Minimum Curvature

2.00 sigma

EDM 2003.21 Single User Db

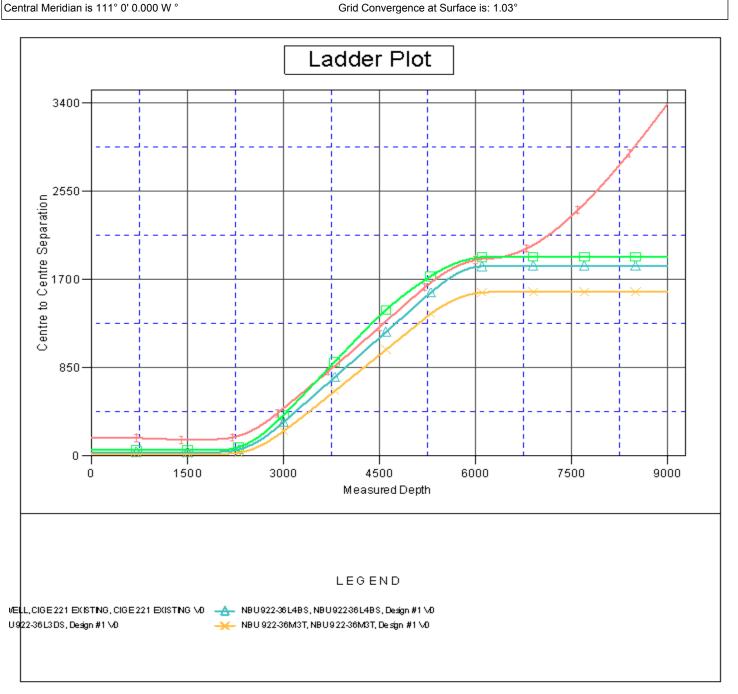
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4984.00ft (Original Well Ele\Coordinates are relative to: NBU 922-36N4BS

Offset Depths are relative to Offset Datum

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N

Grid Convergence at Surface is: 1.03°





Anticollision Report

TVD Reference:

MD Reference:



ANADARKO PETROLEUM CORP. Company:

UINTAH COUNTY, UTAH (nad 27) Project:

Reference Site: NBU 922-36M PAD

Site Error: 0.00ft

Reference Well: NBU 922-36N4BS

Well Error: 0.00ft

Reference Wellbore NBU 922-36N4BS

Reference Design: Design #1

Local Co-ordinate Reference:

Well NBU 922-36N4BS

WELL @ 4984.00ft (Original Well Elev) WELL @ 4984.00ft (Original Well Elev)

North Reference:

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

EDM 2003.21 Single User Db Database:

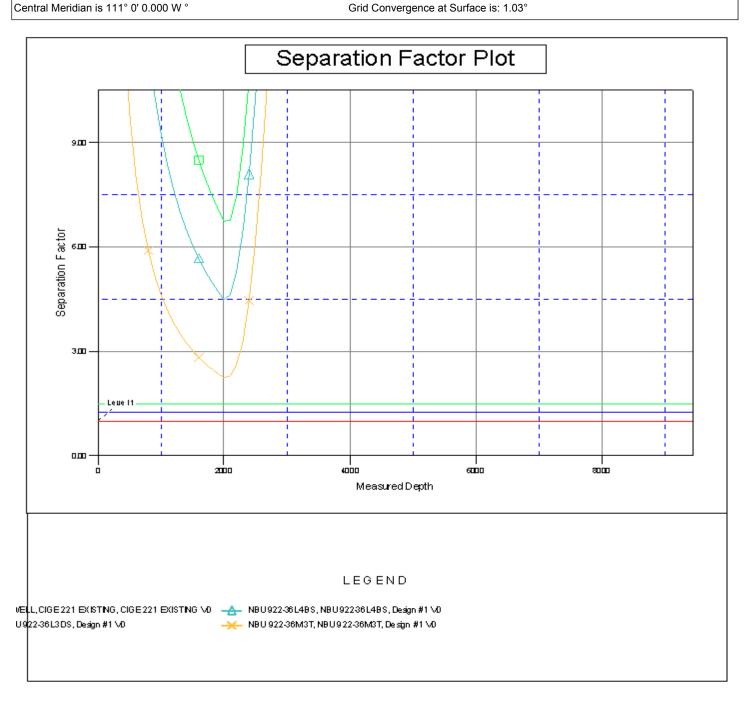
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4984.00ft (Original Well ElevCoordinates are relative to: NBU 922-36N4BS

Offset Depths are relative to Offset Datum

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N

Grid Convergence at Surface is: 1.03°





Weatherford®

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Robert Scott

Email: robert.scott@weatherford.com

NBU 922-36N4BS

Pad: NBU 922-36M (CIGE 221) Surface: 538' FSL, 453' FWL (SW/4SW/4) BHL: 510' FSL 2,095' FWL (SE/4SW/4) Sec. 36 T9S R22E

> Uintah, Utah Mineral Lease: ML22650

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. – 2. <u>Estimated Tops of Important Geologic Markers</u>: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	Resource
Uinta	0 – Surface	
Green River	1,161'	
Birds Nest	1,376'	Water
Mahogany	1,904'	Water
Wasatch	4,178'	Gas
Mesaverde	6,435'	Gas
MVU2	7,381'	Gas
MVL1	7,959'	Gas
TVD	8,600'	
TD	8,994'	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program.

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program.

Evaluation Program:

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 8,994' TD, approximately equals 5,323 psi (calculated at 0.57 psi/foot).

Maximum anticipated surface pressure equals approximately 3,198 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

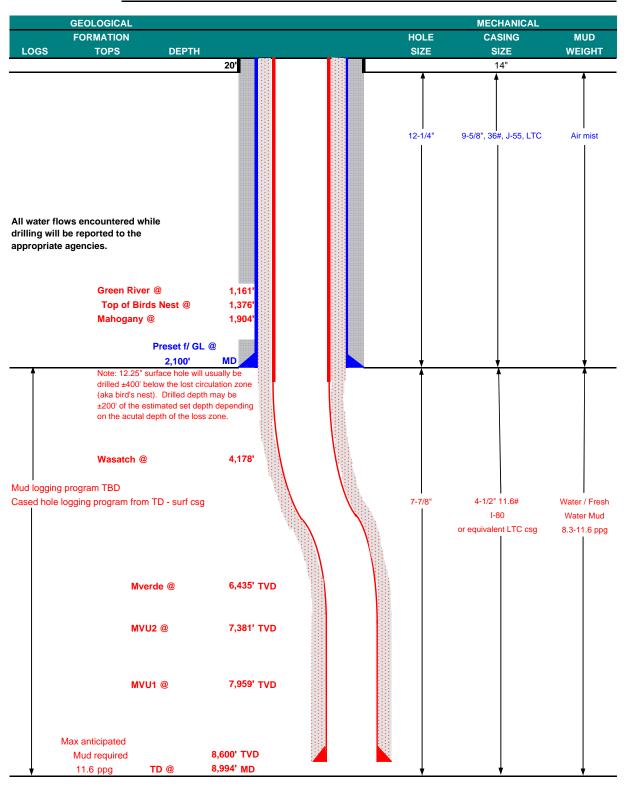
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP June 8, 2009 NBU 922-36N4BS 8,994' MD WELL NAME TD 8,600' **FIELD** Natural Buttes **COUNTY** Uintah STATE Utah **ELEVATION** 4,968' GL KB 4,983 SURFACE LOCATION SW/4 SW/4 538' FSL 453' FWL Sec 36 T 9S R 22E -109.395419 NAD 27 Latitude: 39.986759 Longitude: BTM HOLE LOCATION SE/4 SW/4 510' FSL 2,095' FWL Sec 36 T 9S R 22E Latitude: 39.986675 Longitude: -109.389561 NAD 27 OBJECTIVE ZONE(S) Wasatch/Mesaverde ADDITIONAL INFO Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), Tri-County Health Dept.





KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

CONDUCTOR

PRODUCTION

SURFACE

							DESIGN FACTORS			
SIZE	INT	INTERVAL			GR.	CPLG.	BURST	COLLAPSE	TENSION	
14"	0-40'									
							3,520	2,020	453,000	
9-5/8"	0	to	2,100	36.00	J-55	LTC	1.02	2.06	7.63	
							7,780	6,350	201,000	
4-1/2"	0	to	8,994	11.60	I-80	LTC	2.36	1.22	2.21	

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 11.6 ppg) 0.22 psi/ft = gradient for partially evac wellbore (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 3,198 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 11.6 ppg) 0.59 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 5,323 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to sur	face, option	on 2 will be	utilized	
Option 2 LEAD	1,600'	65/35 Poz + 6% Gel + 10 pps gilsonite	380	35%	12.60	1.81
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	180	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION LEAD	3,674'	Premium Lite II + 3% KCI + 0.25 pps	350	40%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,320'	50/50 Poz/G + 10% salt + 2% gel	1,300	40%	14.30	1.31
		+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

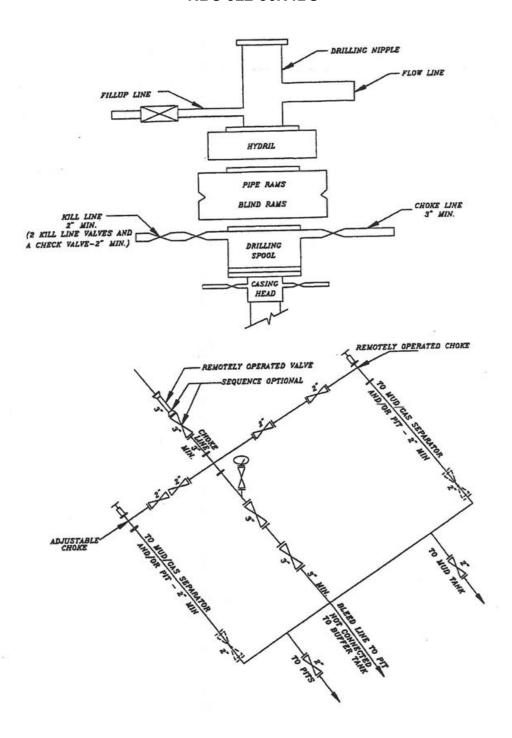
John Merkel / Lovel Young

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

	Surveys will be taken at 1,000'	minimum intervals.		
	Most rigs have PVT System for	mud monitoring. If no PVT is available, visual monitoring wi	ill be utilized.	
DRILLING	ENGINEER:		DATE:	
		John Huycke / Emile Goodwin	_	
DRILLING	SUPERINTENDENT:		DATE:	

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 922-36N4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

WELL PAD INTERFERENCE PLAT

DIRECTIONAL PAD - CIGE 221

SURFACE POSITION FOOTAGES:

NBU 922-36M3T 538' FSL & 433' FWL

NBU 922-36L3DS 539' FSL & 393' FWL

NBU 922-36L4BS 539' FSL & 413' FWL

NBU 922-36N4BS 538' FSL & 453' FWL

CIGE 221 (Existing Well Head) 548' FSL & 513' FWL

> Az=359.33222° V*OO°40'04"W*

Az=270.13167° N89°52'06"W

(Well Centerline)

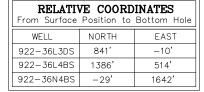
BASIS OF BEARINGS IS THE SOUTH LINE OF THE SW 1/4 OF SECTION 36, T9S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR S89'57'57"E.

BOTTOM HOLE FOOTAGES

NBU 922-36L3DS 1380' FSL & 385' FWL

NBU 922-36L4BS 1925' FSL & 930' FWL

NBU 922-36N4BS 510' FSL & 2095' FWL



Az=91.02639° <u>S88°58'25"E — 1642.23</u>

(To Bottom Hole)

LATITUDE & LONGITUDE Bottom Hole - (NAD 83)							
WELL	N. LATITUDE	W. LONGITUDE					
922-36L3DS	39°59'20.525" 39.989035°	109°23'46.850" 109.396347°					
922-36L4BS	39*59'25.902" 39.990528°	109*23'39.859" 109.394405°					
922-36N4BS	39*59'11.906" 39.986641*	109*23'24.872" 109.390242*					

LATITUDE & LONGITUDE Bottom Hole - (NAD 27)							
WELL	N. LATITUDE	W. LONGITUDE					
922-36L3DS	39°59'20.649" 39.989069°	109°23'44.397" 109.395666°					
922-36L4BS	39°59'26.027" 39.990563°	109°23'37.406" 109.393724°					
922-36N4BS	39*59'12.030" 39.986675*	109°23'22.421" 109.389561°					

NBU 922-36L3DS_
Az. to exist. W.H.=85.30667' 120.5'

NBU 922-36L4BSAz. to exist. W.H.=84.35306' 100.5'

NBU 922-36M3T Az. to exist. W.H.=82.90472' 80.6'

NBU 922-36N4BSAz. to exist. W.H.=80.55111' 60.9'
EXISTING WELL: CIGE 221

Vertical

Well

	LATITUDE & LONGITUDE Surface Position — (NAD 83)							
	WELL	N. LATITUDE	W. LONGITUDE					
_	922-36M3T	39°59'12.210" 39.986725°	109*23'46.217" 109.396172*					
	922-36L3DS	39°59'12.212" 39.986725°	109°23'46.732" 109.396314°					
	922-36L4BS	39°59'12.211" 39.986725°	109*23'46.475" 109.396243°					
	922-36N4BS	39°59'12.210" 39.986725°	109°23'45.961" 109.396100°					
	Existing Well CIGE 221	39°59'12.308" 39.986752°	109°23'45.189" 109.395886°					

	WELL	N. LATITUDE	W. LONGITUDE
9	922-36M3T	39*59'12.334" 39.986760*	109°23'43.765" 109.395490°
	922-36L3DS	39°59'12.336" 39.986760°	109°23'44.280" 109.395633°
	922-36L4BS	39*59'12.335" 39.986760*	109°23'44.022" 109.395562°
	922-36N4BS	39°59'12.334" 39.986759°	109°23'43.509" 109.395419°
-			

39*59'12.432"

39.986787°

LATITUDE & LONGITUDESurface Position — (NAD 27)

 60,	30,	,		60,
	S	C A L	F	
	S	CAL	. L	

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

NBU 922-36M3T, NBU 922-36L3DS, NBU 922-36L4BS & NBU 922-36N4BS LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M. UINTAH COUNTY, UTAH.



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307—674—0609 Fax 307—674—0182

DATE SURVEYED: 09-16-08	SURVEYED BY: M.S.B.	
DATE DRAWN: 10-03-08	DRAWN BY: E.M.S.	
	REVISED: 1-28-09	

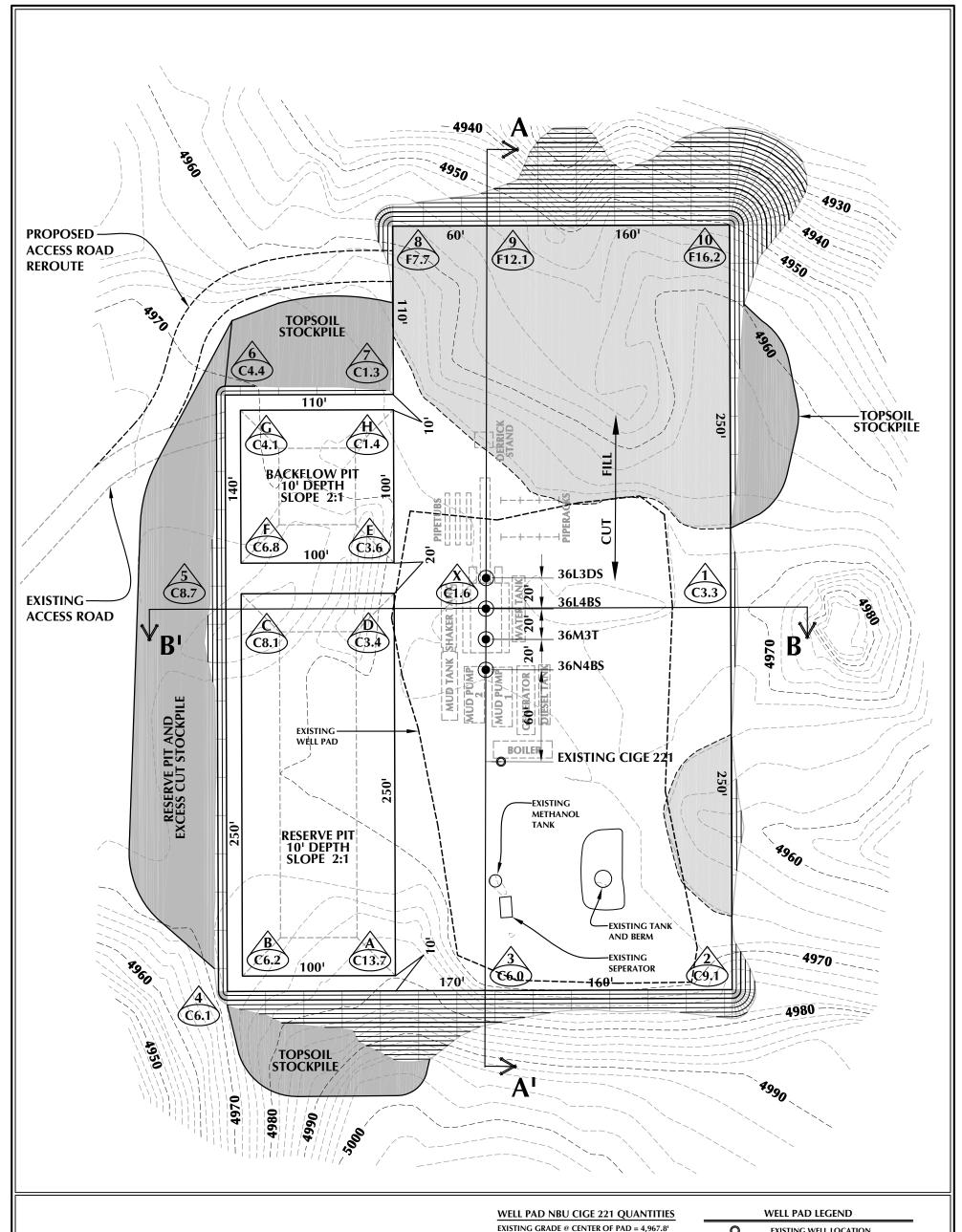
Timberline (435) 789-1365 Engineering & Land Surveying, Inc. 209 NORTH 300 WEST VERNAL, UTAH 84078

Existing Well CIGE 221

> 5 OF 13

109*23'42.737"

109.395205°



KERR-MCGEE OIL & GAS ONSHORE L.P.

1099 18th Street - Denver, Colorado 80202

WELL PAD - LOCATION LAYOUT NBU 922-36M3T, NBU 922-36L3DS, NBU 922-36L4BS, NBU 922-36N4BS LOCATED IN SECTION 36, T.9S., R.22E. S.L.B.&M., UINTAH COUNTY, UTAH



371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609

Fax 307-674-0182

FILL SLOPES = 1.5:1 TOTAL CUT FOR WELL PAD = 15,149 C.Y. TOTAL FILL FOR WELL PAD = 14,648 C.Y.

FINISHED GRADE ELEVATION = 4,966.21

CUT SLOPES = 1.5:1

TOPSOIL ® 6" DEPTH = 2,345 C.Y.
EXCESS MATERIAL = 501 C.Y.
TOTAL DISTURBANCE = 4.07 ACRES
SHRINKAGE FACTOR = 1.10 SWELL FACTOR = 1.00 RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 25,880 BARRELS RESERVE PIT VOLUME +/- 7,185 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)

+/- 8,780 BARRELS
BACKFLOW PIT VOLUME +/- 2,520 CY

]	Scale:	1"=60"	Date:	1/29/09	SHEET NO:		
]	REVISED:			BY Date	6	6 OF 13	



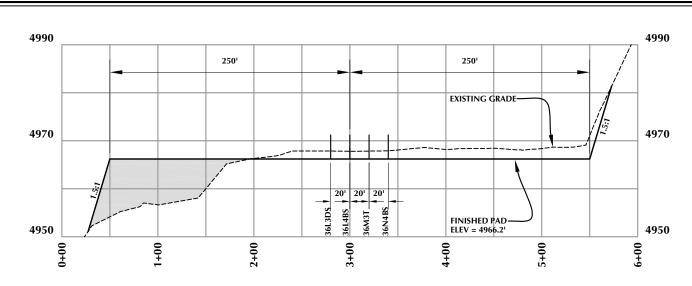
EXISTING WELL LOCATION PROPOSED WELL LOCATION EXISTING CONTOURS (2' INTERVAL) PROPOSED CONTOURS (21 INTERVAL)



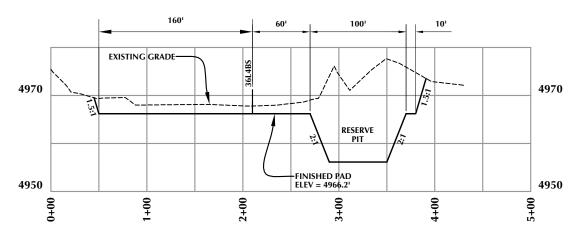
HORIZONTAL 2' CONTOURS

TimberlineEngineering & Land Surveying, Inc. 38 WEST 100 NORTH

(435) 789-1365 VERNAL, UTAH 84078



CROSS SECTION A-A¹



CROSS SECTION B-B'

KERR-MCGEE OIL & GAS ONSHORE L.P.

1099 18th Street - Denver, Colorado 80202

WELL PAD - CROSS SECTIONS NBU 922-36M3T, NBU 922-36L3DS, NBU 922-36L4BS, NBU 922-36N4BS LOCATED IN SECTION 36, T.9S., R.22E. S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC

371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

j	Scale:	1"=100"	Date:	1/29/09	SHEET NO:		Ī
	REVISED:			BY DATE	7	7 OF 13	
							ш

HORIZONTAL	0	50	100 1" = 100'
VERTICAL	0	10	20 1" = 20'

Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078

A PIWellNo-43047503670000'

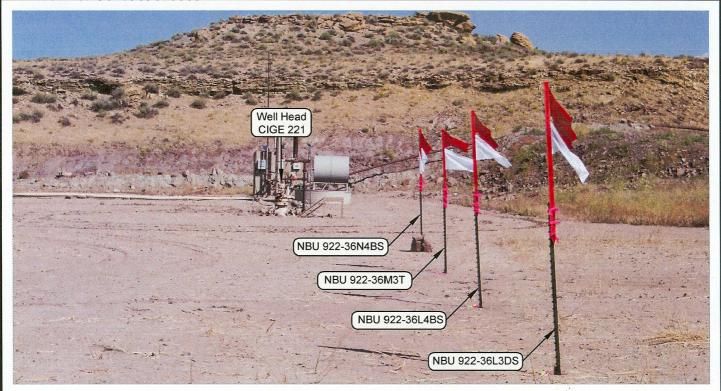


PHOTO VIEW: FROM LOCATION STAKES TO EXISTING WELL HEAD

CAMERA ANGLE: EASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHWESTERLY

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

NBU 922-36M3T, NBU 922-36L3DS, NBU 922-36L4BS & NBU 922-36N4BS LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M. UINTAH COUNTY, UTAH.

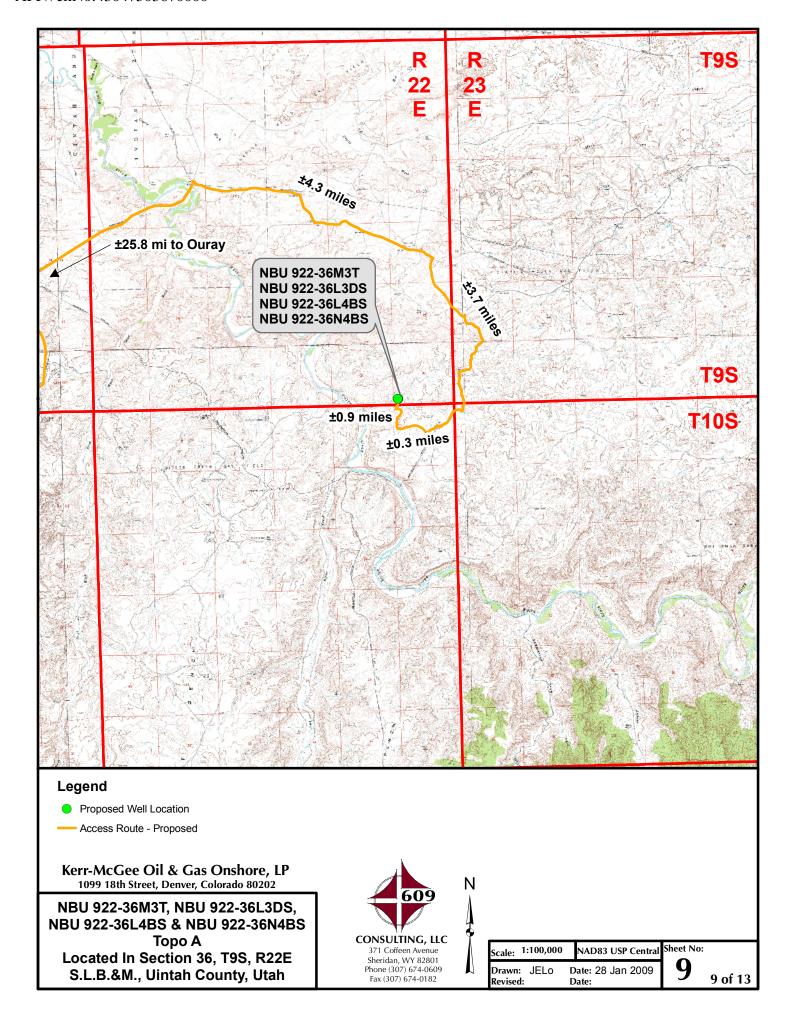


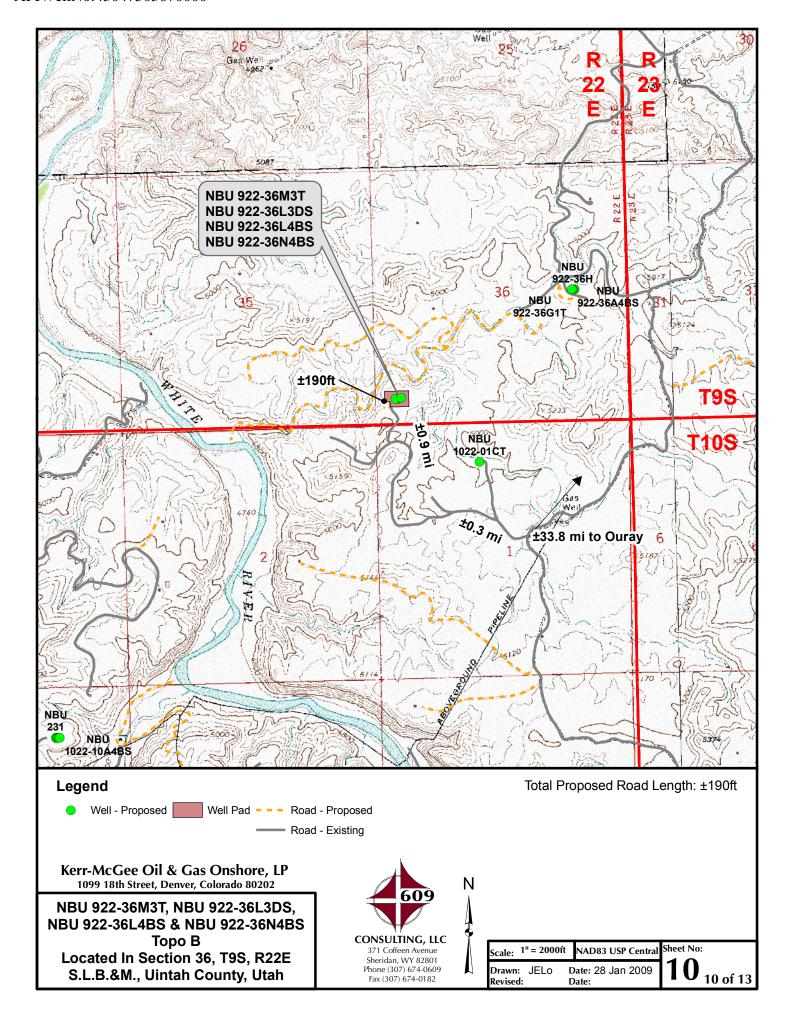
CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

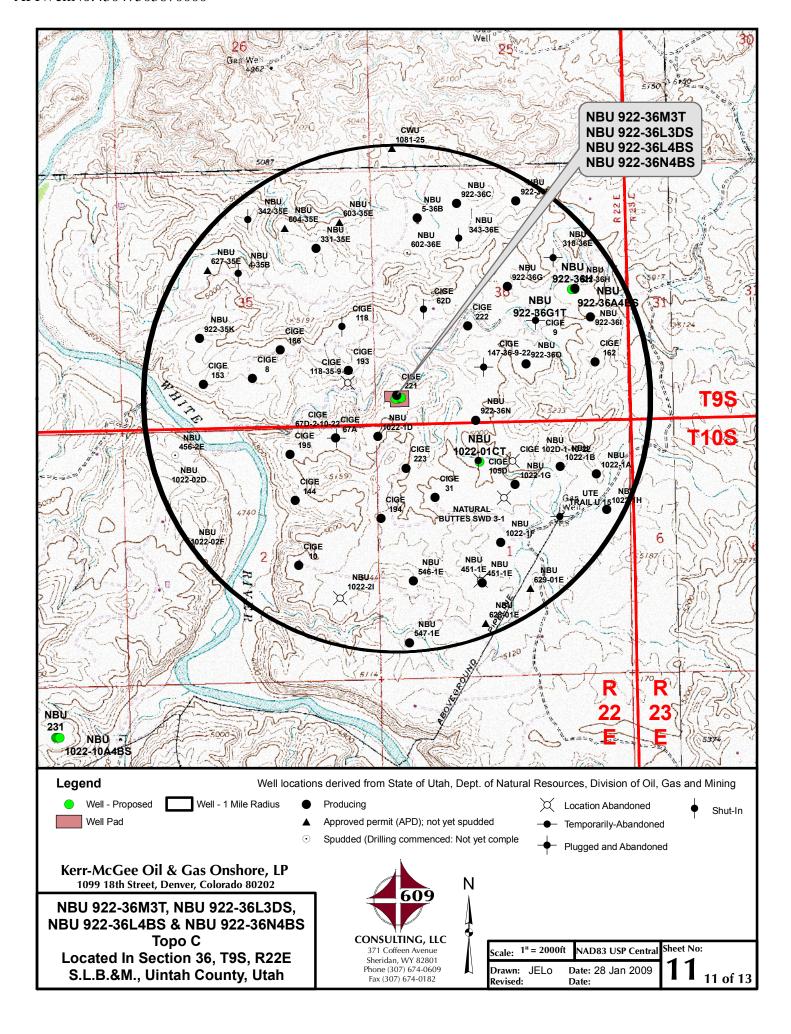
LOCATION	DATE TAKEN: 09-16-08		
LOCATION	1110105	DATE DRAWN: 10-03-08	
TAKEN BY: M.S.B.	DRAWN BY: E.M.S.	REVISED: 01-28-09	

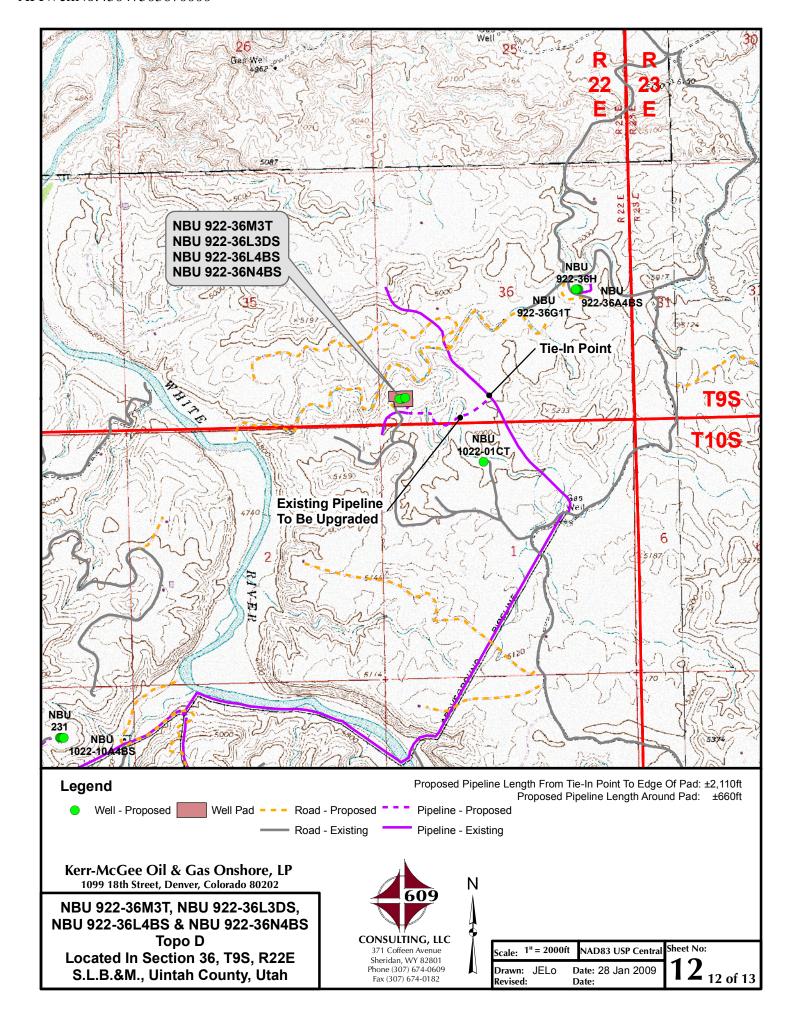
Timberline(435) 789-1365 Engineering & Land Surveying, Inc. 209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET 8 OF 13









Kerr-McGee Oil & Gas Onshore, LP NBU 922-36M3T, NBU 922-36L3DS, NBU 922-36L4BS & NBU 922-36N4BS Section 36, T9S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY, THEN NORTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 14.6 MILES TO THE INTERSECTION OF THE CHAPETA WELLS ROAD (COUNTY B ROAD 3410) WHICH ROAD INTERSECTION IS APPROXIMATELY 400 FEET NORTHEAST OF THE MOUNTAIN FUEL BRIDGE, AT THE WHITE RIVER. EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 4.3 MILES ALONG THE CHAPETA WELLS ROAD TO THE INTERSECTION OF THE ATCHEE WASH ROAD (COUNTY B ROAD 4240). EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY, THEN SOUTHERLY DIRECTION ALONG THE ATCHEE WASH ROAD APPROXIMATELY 3.7 MILES TO AN EXISTING SERVICE ROAD TO THE SOUTHWEST. EXIT RIGHT AND PROCEED IN A SOUTHWESTERLY, THEN NORTHWESTERLY, THEN WESTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 0.3 MILES TO A SECOND SERVICE ROAD TO THE WEST. EXIT LEFT AND PROCEED IN A WESTERLY THEN NORTHERLY DIRECTION ALONG THE SECOND SERVICE ROAD APPROXIMATELY 0.9 MILES TO THE EXISTING WELL PAD.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 65.7 MILES IN A SOUTHERLY DIRECTION.

NBU 922-36L3DS

Surface: 539' FSL, 393' FWL (SW/4SW/4) BHL: 1,380' FSL 385' FWL (SW/4SW/4)

NBU 922-36L4BS

Surface: 539' FSL, 413' FWL (SW/4SW/4) BHL: 1,925' FSL 930' FWL (NW/4SW/4)

NBU 922-36M3T

Surface: 538' FSL, 433' FWL (SW/4SW/4)

NBU 922-36N4BS

Surface: 538' FSL, 453' FWL (SW/4SW/4) BHL: 510' FSL 2,095' FWL (SE/4SW/4)

Section 36 Township 9 South Range 22 East Pad: NBU 922-36M (CIGE 221) Uintah, Utah Surface: State Minerals: State – ML22650

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

Directional Drilling:

In accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

1. Existing Roads:

Refer to Topo Map A for directions to the location.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

NBU 922-36L3DS/ 36L4BS/ 36N4BS/ 36M3T

Page 2
Surface Use and Operations Plan

2. Planned Access Roads:

Approximately ± 0.04 mi. (± 190 ') of new access road is proposed. Please refer to the attached Topo Map B.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. Appropriate water control will be installed to control erosion.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

The following guidelines will apply if the well is productive.

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The required color is Shadow Gray, a non-reflective earthtone.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

NBU 922-36L3DS/ 36L4BS/ 36N4BS/ 36M3T

Page 3
Surface Use and Operations Plan

5. <u>Location and Type of Water Supply</u>:

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim #43-8496, Application #53617.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

6. Source of Construction Materials:

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

7. <u>Methods of Handling Waste Materials</u>:

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

A plastic reinforced liner and felt will be used; it will be a minimum of 20 mil thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit. Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

NBU 922-36L3DS/ 36L4BS/ 36N4BS/ 36M3T

Page 4 Surface Use and Operations Plan

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

Any produced water from the proposed well will be contained in a water tank and will then be hauled By truck to one of the pre-approved disposal sites: RNI in Sec. 5 T9S R22E, NBU #159 in Sec. 35 T9S R21E, Ace Oilfield in Sec. 2 T6S R20E, MC&MC in Sec. 12 T6S R19E, Pipeline Facility in Sec. 36 T9S R20E, Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E, Bonanza Evaporation Pond in Sec. 2 T10S R23E.

8. Ancillary Facilities:

None are anticipated.

9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

All pits will be fenced according to the following minimum standards:

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

The reserve pit fencing will be on three sides during drilling operations, and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

NBU 922-36L3DS/ 36L4BS/ 36N4BS/ 36M3T

Page 5
Surface Use and Operations Plan

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be resurveyed and a Form 9 shall be submitted.

10. Plans for Reclamation of the Surface:

Producing Location:

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

A plastic, nylon reinforced liner will be used, it shall be torn and perforated before backfilling of the reserve pit.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

Dry Hole/Abandoned Location:

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

All disturbed surfaces will be recontoured to the approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

Kerr-McGee Oil & Gas Onshore LP NBU 922-36L3DS/ 36L4BS/ 36N4BS/ 36M3T

Page 6 Surface Use and Operations Plan

11. Surface/Mineral Ownership:

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

12. <u>Other Information</u>:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

A Class III archaeological survey report and paleontological survey report is attached.

NBU 922-36L3DS/ 36L4BS/ 36N4BS/ 36M3T

Page 7
Surface Use and Operations Plan

13. Lessee's or Operators' Representative & Certification:

Kathy Schneebeck Dulnoan Staff Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6226 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by State Surety Bond 22013542.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Kathy Schneebeck Dulnoan

April 8, 2009

Date



Kerr-McGee Oil & Gas Onshore LP P.O. Box 173779 Denver, CO 80217-3779

April 6, 2009

Mrs. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 922-36N4BS

T9S-R22E

Section 36: SWSW/SESW Surface: 538' FSL, 453' FWL

Bottom Hole: 510' FSL, 2095' FWL

Uintah County, Utah

Dear Mrs. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

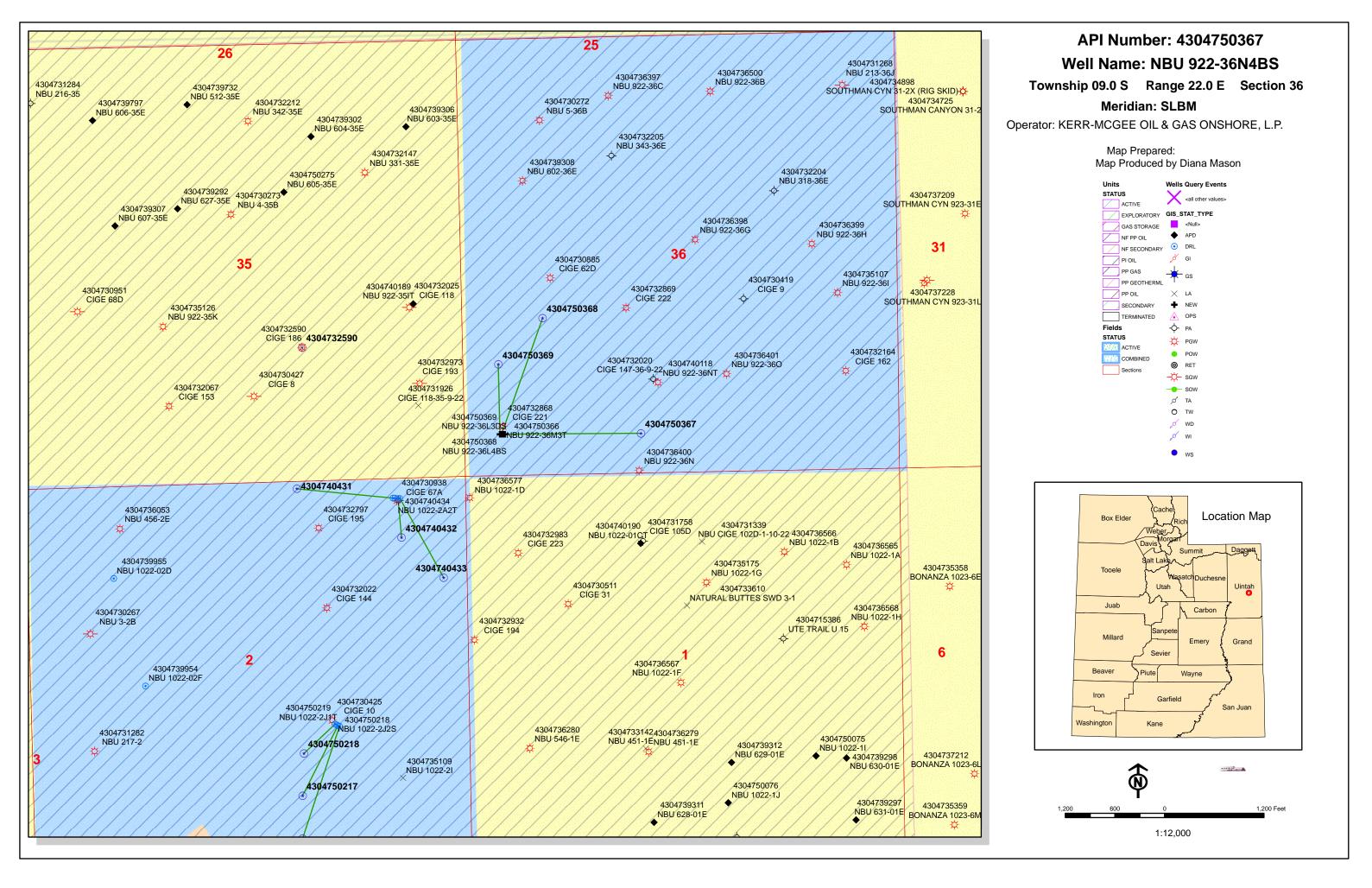
- Kerr-McGee's NBU 922-36N4BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Jessy Pink Landman



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

May 1, 2009

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

43-047-50362 NBU 921-26D1CS Sec 26 T09S R21E 0836 FNL 1648 FWL BHL Sec 26 T09S R21E 0600 FNL 0980 FWL

43-047-50363 NBU 921-26D1BS Sec 26 T09S R21E 0820 FNL 1661 FWL BHL Sec 26 T09S R21E 0110 FNL 0980 FWL

43-047-50364 NBU 921-26B3S Sec 26 T09S R21E 0804 FNL 1673 FWL BHL Sec 26 T09S R21E 0950 FNL 2360 FEL

43-047-50365 NBU 921-26B2S Sec 26 T09S R21E 0788 FNL 1685 FWL

BHL Sec 26 T09S R21E 0460 FNL 2360 FEL

43-047-50366 NBU 922-36M3T Sec 36 T09S R22E 0538 FSL 0433 FWL

43-047-50367 NBU 922-36N4BS Sec 36 T09S R22E 0538 FSL 0453 FWL BHL Sec 36 T09S R22E 0510 FSL 2095 FWL

43-047-50368 NBU 922-36L4BS Sec 36 T09S R22E 0539 FSL 0413 FWL BHL Sec 36 T09S R22E 1925 FSL 0930 FWL

43-047-50369 NBU 922-36L3DS Sec 36 T09S R22E 0539 FSL 0393 FWL BHL Sec 36 T09S R22E 1380 FSL 0385 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:5-1-09

From: Jim Davis

To: Bonner, Ed; Mason, Diana

Date: 5/18/2009 4:11 PM

Subject: Kerr McGee well approvals.

CC: Garrison, LaVonne

The following wells have been approved by SITLA including arch and paleo clearance. Kerr-McGee's NBU 922-36M3T [API #4304750366]

Kerr-McGee's NBU 922-36M3T [API #4304750366] Kerr-McGee's NBU 922-36N4BS [API #4304750367] Kerr-McGee's NBU 922-36L4BS [API #4304750368] Kerr-McGee's NBU 922-36L3DS [API #4304750369]

-Jim

Jim Davis Utah Trust Lands Administration jimdavis1@utah.gov

Phone: (801) 538-5156

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-36N4BS 43047503670000

Well Name	KERR-MCGEE O	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-36N4BS 4304750367			
String	Surf	Prod			
Casing Size(")	9.625	4.500			
Setting Depth (TVD)	2100	8994			
Previous Shoe Setting Depth (TVD)	40	2100			
Max Mud Weight (ppg)	8.3	11.6			
BOPE Proposed (psi)	500	5000			
Casing Internal Yield (psi)	3520	7780			
Operators Max Anticipated Pressure (psi)	5323	11.4			

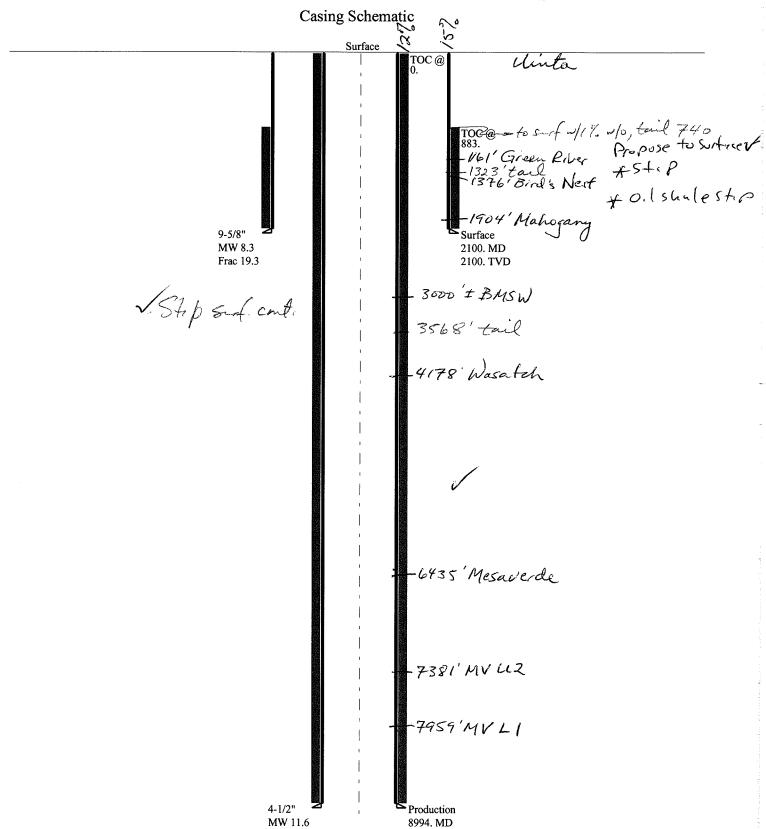
Calculations	Surf String	9.625	"
Max BPH (psi)	.052*Setting Depth*MW=	906	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	654	NO OK
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	444	YES
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	453	NO Reasonable depth for area
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @	Previous Casing Shoe=	40	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BPH (psi)	.052*Setting Depth*MW=	5425	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4346	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3446	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	3908	NO Reasonable
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @	Previous Casing Shoe=	2100	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe Max BHP22*(Setting Depth - Previous Shoe Depth)=			NO
Required Casing/BOPE To	est Pressure=		psi
*Max Pressure Allowed @	Previous Casing Shoe=		psi *Assumes 1psi/ft frac gradient

Calculations	String	"
Max BPH (psi)	.052*Setting Depth*MW=	
		BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	NO
		*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe Max BHP22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE To	est Pressure=	psi
*Max Pressure Allowed @	Previous Casing Shoe=	psi *Assumes 1psi/ft frac gradient

43047503670000 NBU 922-36N4BS



8600. TVD

43047503670000 NBU 922-36N4BS Well name:

KERR-MCGEE OIL & GAS ONSHORE, L.P. Operator:

Surface Project ID: String type: 43-047-50367

COUNTY UINTAH Location:

Environment: Design parameters: Minimum design factors:

H2S considered? Collapse Collapse: No 74 °F Mud weight: 8.330 ppg Design factor 1.125 Surface temperature:

103 °F Bottom hole temperature: Design is based on evacuated pipe. Temperature gradient: 1.40 °F/100ft

Minimum section length: 100 ft

Burst: 883 ft Design factor 1.00 Cement top:

Burst

Max anticipated surface pressure: 1,848 psi **Directional Info - Build & Drop** 0.120 psi/ft

Internal gradient: **Tension:** 1.80 (J) Calculated BHP 2,100 psi 8 Round STC: Kick-off point 2000 ft Departure at shoe: 8 Round LTC: 1.70 (J) 3ft 3.5 °/100ft

Maximum dogleg: No backup mud specified. **Buttress:** 1.60 (J) 3.5 ° 1.50 (J) Inclination at shoe: Premium: 1.50 (B) Re subsequent strings:

Body yield: Next setting depth: 8,600 ft Tension is based on air weight. Next mud weight: 11.600 ppg

Next setting BHP: 5,182 psi Neutral point: 1,841 ft Fracture mud wt: 19.250 ppg 2,100 ft Fracture depth:

Injection pressure: 2,100 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)	
1	2100	9.625	36.00	J-55	LT&C	2100	2100	8.796	17172	
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor	
1	909	1933	2.127	2100	3520	1.68	75.6	453	5.99 J	

Helen Sadik-Macdonald Prepared Div of Oil, Gas & Mining by:

Phone: 801 538-5357 FAX: 801-359-3940

Date: June 9,2009 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2100 ft, a mud weight of 8.33 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

43047503670000 NBU 922-36N4BS Well name:

KERR-MCGEE OIL & GAS ONSHORE, L.P. Operator:

String type: Production Project ID: 43-047-50367

UINTAH COUNTY Location:

Minimum design factors: Design parameters: **Environment:**

Collapse Collapse: H2S considered? No 74 °F Mud weight: 11.600 ppg Design factor 1.125 Surface temperature:

194 °F Bottom hole temperature: Design is based on evacuated pipe. 1.40 °F/100ft Temperature gradient:

Minimum section length: 100 ft

1.60 (B)

Burst:

Design factor 1.00 Cement top: Surface

Burst

Max anticipated surface pressure: 3,441 psi

Internal gradient: 0.220 psi/ft **Directional Info - Build & Drop Tension:** Calculated BHP 8 Round STC: 1.80 (J) Kick-off point 2000 ft 5,182 psi 1.80 (J) 8 Round LTC: Departure at shoe: 1642 ft

3.5 °/100ft 0 ° No backup mud specified. **Buttress:** 1.60 (J) Maximum dogleg: 1.50 (J) Inclination at shoe: Premium:

> Body yield: Tension is based on air weight.

Neutral point: 7.503 ft

Run Segment Nominal End True Vert Measured Drift Est. **Finish** Depth Depth Seq Length Size Weight Grade Diameter Cost (lbs/ft) (ft) (in) (ft) (ft) (in) (\$) LT&C 8600 8994 37041 1 8994 4.5 11.60 N-80 3.875 Run Collapse Collapse Collapse **Burst Burst Burst** Tension **Tension Tension** Load Strength Design Load Strength Design Load Strength Design Seq (psi) **Factor** (psi) (psi) **Factor** (kips) (kips) **Factor** (psi) 1 5182 6350 1.225 5333 7780 1.46 99.8 223 2.24 J

Helen Sadik-Macdonald Prepared Div of Oil, Gas & Mining by:

Phone: 801 538-5357 FAX: 801-359-3940

Date: June 9,2009 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8600 ft, a mud weight of 11.6 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name NBU 922-36N4BS

API Number 43047503670000 APD No 1440 Field/Unit NATURAL BUTTES

Location: 1/4,1/4 SWSW **Sec** 36 **Tw** 9.0S **Rng** 22.0E 538 FSL 453 FWL

GPS Coord (UTM) Surface Owner

Participants

Floyd Bartlett (DOGM), Ed Bonner (SITLA), Ramie Hoopes, Clay Einerson, Griz Oleen, Tony Kzneck, Charles Chase (Kerr McGee), Ben Williams (UDWR) and Kolby Kay (Timberline Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ½ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43 air miles to the northwest. Access from Vernal is approximately 65.7 road miles following Utah State, Uintah County and oilfield development roads to the location.

The proposed 4 well pad for the NBU 922-36 M3T, L3DS, L4BS, N4BS which encompasses an existing pad of the CIGE 221 gas well will be significantly enlarged. The existing well probably will be plugged. The surface of the location will be lowered up to 1.6 feet to obtain fill for the enlargement. Enlargement will be in all directions except to the east which is against a rocky hill. Short draws to the west will be filled. A knoll to the north will not be disturbed. A deep canyon parallels the site on the west. It was decided that rounding would occur as needed between Corners 9 and 10 so that fill would not extend beyond any benches in that area. This will make it easier to recover the fill. The topsoil stockpile between Corners 3 and 4 will be moved to the north. The flow-back pit will not be constructed at least at this time. Reserve pit spoils may also be placed in this area. No other drainage concerns exist. The White River is approximately 3/4 mile to the west. The existing pad shows no stability problems and the site has no apparent concerns for constructing an enlarged pad as modified and drilling and operating the planned wells. It is the only suitable location in the immediate area. A new Location Layout is being prepared to reflect the above adjustments.

Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use

Wildlfe Habitat Existing Well Pad

New Road Miles Well Pad Src Const Material Surface Formation

0 Width 320 Length 500 Onsite UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

6/17/2009 Page 1

Flora / Fauna

Area beyond the existing pad is poorly vegetated with greasewood, cheatgrass, black sagebrush, broom snakeweed, globemallow, Sitanion hystrix, shadscale, rabbitbrush, pepper weed, halogeton and annuals.

Sheep, deer, antelope, coyote, and other small mammals and birds.

Soil Type and Characteristics

Shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources?

Reserve Pit

Site-Specific Factors	Site R	anking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	High permeability	20	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	45	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut in the southeast corner of the location. Dimensions are 100' x 250' x 10' deep with 2' of freeboard. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a 30-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock. The second pit shown is not approved with this permit. Kerr McGee was informed they would have to submit a separate application and plan for this pit.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 30 Pit Underlayment Required? Y

Other Observations / Comments

6/17/2009 Page 2

On 5/13/2009 the following met and discussed the changes incorporated in the above description. Floyd Bartlett (DOGM), Clay Einerson, Lovell Young (Kerr McGee), and Kolby Kay (Timberline Engineering and Land Surveying).

Floyd Bartlett 4/28/2009 **Evaluator Date / Time**

6/17/2009 Page 3

Application for Permit to Drill Statement of Basis

6/17/2009 Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellN	0			Status		Well Type	Surf Ov	vner CBM
1440	4304750367	70000			LOCK	ED	GW	S	No
Operator	KERR-MC0	GEE O	IL & C	GAS	ONSHOR	E, L.P.	Surface Owner-API)	
Well Name	NBU 922-3	6N4BS	5				Unit	NATUR	AL BUTTES
Field	NATURAL	BUTT	ES				Type of Work	DRILL	
Location	SWSW 36	5 9S	22E	S	538 FSL	453 FWL	GPS Coord (UTM)	636996E	4427306N

Geologic Statement of Basis

Kerr McGee proposes to set 2,150' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location . The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The production casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters up hole. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill 5/19/2009 **APD Evaluator Date / Time**

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43 air miles to the northwest. Access from Vernal is approximately 65.7 road miles following Utah State, Uintah County and oilfield development roads to the location.

The proposed 4 well pad for the NBU 922-36 M3T, L3DS, L4BS, N4BS which encompasses an existing pad of the CIGE 221 gas well will be significantly enlarged. The existing well probably will be plugged. The surface of the location will be lowered up to 1.6 feet to obtain fill for the enlargement. Enlargement will be in all directions except to the east which is against a rocky hill. Short draws to the west will be filled. A knoll to the north will not be disturbed. A deep canyon parallels the site on the west. It was decided that rounding would occur as needed between Corners 9 and 10 so that fill would not extend beyond any benches in that area. This will make it easier to recover the fill. The topsoil stockpile between Corners 3 and 4 will be moved to the north. The flow-back pit will not be constructed at least at this time. Reserve pit spoils may also be placed in this area. No other drainage concerns exist. The White River is approximately 3/4 mile to the west. The existing pad shows no stability problems and the site has no apparent concerns for constructing an enlarged pad as modified and drilling and operating the planned wells. It is the only suitable location in the immediate area. A new Location Layout is being prepared to reflect the above adjustments.

Both the surface and minerals are owned by SITLA. Ed Bonner of SITLA attended the pre-site and was agreeable to the modifications. He had no additional concerns regarding the proposal.

Ben Williams of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the wells at this location. He provided Ed Bonner of SITLA and Ramie Hoopes of Kerr McGee a written wildlife evaluation and a copy of a

Application for Permit to Drill Statement of Basis

6/17/2009 Utah Division of Oil, Gas and Mining

Page 2

recommended seed mix to be used for re-vegetating the disturbed area.

Floyd Bartlett 4/28/2009
Onsite Evaluator Date / Time

Conditions of Approval / Application for Permit to Drill

Category Condition

Pits A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the

reserve pit.

Surface The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED:	4/23/2009		API NO. ASSIGNED:	43047503670000
WELL NAME:	NBU 922-36N4BS			
OPERATOR:	KERR-MCGEE OIL & GAS ON	SHORE, L.P. (N2995)	PHONE NUMBER:	720 929-6007
CONTACT:	Kathy Schneebeck-Dulnoan			
PROPOSED LOCATION:	SWSW 36 090S 220E		Permit Tech Review:	
SURFACE:	0538 FSL 0453 FWL		Engineering Review:	
воттом:	0510 FSL 2095 FWL		Geology Review:	
COUNTY:	UINTAH			
LATITUDE:	39.98672		LONGITUDE:	-109.39546
UTM SURF EASTINGS:	636996.00		NORTHINGS:	4427306.00
FIELD NAME:	NATURAL BUTTES			
LEASE TYPE:	3 - State			
LEASE NUMBER:	ML 22650 PROPOSI	ED PRODUCING FORMAT	ION(S): WASATCH-MESA	N VERDE
SURFACE OWNER:	3 - State		COALBED METHANE:	NO
2505TV5D 4ND (0D D5V5				
RECEIVED AND/OR REVIE	:WED:	LOCATION AND SITING	:	
<u></u> PLAT		R649-2-3.		
Bond: STATE/FEE - 220	013542	Unit: NATURAL BUTTE	ΞS	
Potash		R649-3-2. General		
☑️ Oil Shale 190-5				
Oil Shale 190-3		R649-3-3. Exception	on	
Oil Shale 190-13		✓ Drilling Unit		
✓ Water Permit: Permit	#43-8496	Board Cause No:	Cause 173-14	
RDCC Review:		Effective Date: 1	2/2/1999	
Fee Surface Agreeme	ent	Siting: 460' fr u b	dry & uncomm. tract	
✓ Intent to Commingle		№ R649-3-11. Directi	onal Drill	
Commingling Approved	d			
Comments: Presite C	ompleted			
Stipulations: 5 - State	ement of Basis - bhill			

5 - Statement of Basis - Drill 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason 25 - Surface Casing - hmacdonald API Well No: 43047503670000



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER

Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 922-36N4BS **API Well Number:** 43047503670000

Lease Number: ML 22650 **Surface Owner:** STATE **Approval Date:** 6/24/2009

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Board Cause No. 173-14, completion into and commingling of production from the Wasatch and Mesaverde formations is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

API Well No: 43047503670000

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to spudding the well contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program contact Dustin Doucet
 - Prior to commencing operations to plug and abandon the well contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well contact Dustin Doucet
- Any changes to the approved drilling plan contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

• Dan Jarvis at: (801) 538-5338 office

(801) 942-0871 home

• Carol Daniels at: (801) 538-5284 office

• Dustin Doucet at: (801) 538-5281 office

(801) 733-0983 home

Reporting Requirements:

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

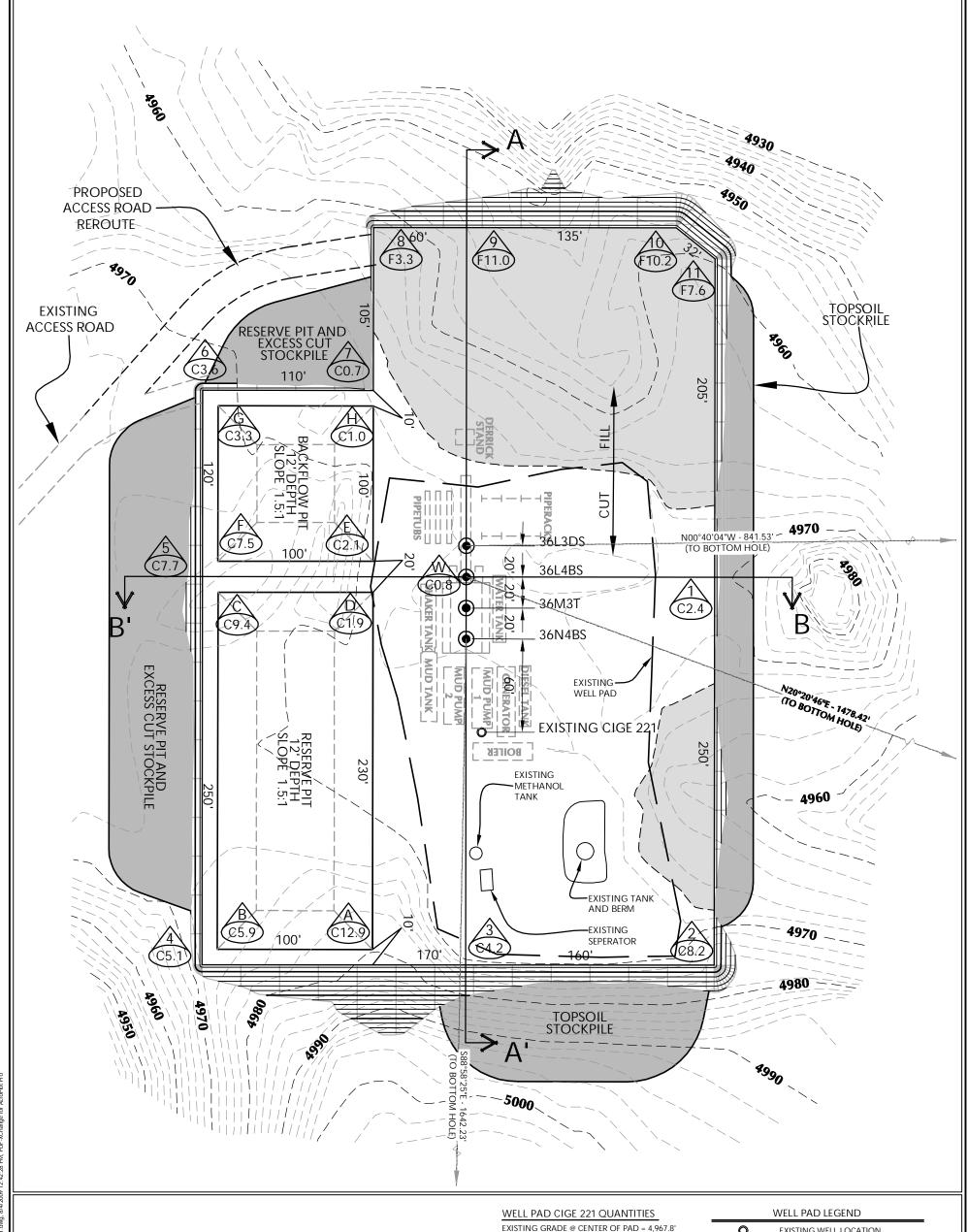
Approved By:

Gil Hunt

Associate Director, Oil & Gas

Die Hunt

			FORM 9			
	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES	S				
	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22650					
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	sals to drill new wells, significantly deepen e gged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-36N4BS			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047503670000			
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0538 FSL 0453 FWL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSW Section: 36	P, RANGE, MERIDIAN: Township: 09.0S Range: 22.0E Meridian: S	5	STATE: UTAH			
11. CHE	CK APPROPRIATE BOXES TO INDICATI	E NATURE OF NOTICE, REPORT,	OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
8/7/2009	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION			
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK			
_	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
☐ DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
Report Date:	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Change pad layout			
12. DESCRIBE PROPOSED OR CO	MPLETED OPERATIONS. Clearly show all perti	inent details including dates, depths, v	olumes, etc.			
Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests a change to the pad layout and cut and fill for this pad, per the on-site meeting with UDOGM personnel. The pad was shortened and a corner rounded to avoid a nearby drainage ditch. Please see the attached revised pad layout and cut and fill diagrams for detailed information. All other information as originally submitted in the APD remains the same. Please contact the undersigned for additional information and/or questions. Thank you. By: Approved by the Utah Division of Oil, Gas and Mining Oil, Gas and Oil, G						
NAME (PLEASE PRINT) Kathy Schneebeck-Dulnoan	PHONE NUMBER	TITLE Staff Regulatory Analyst				
SIGNATURE	720 929-6007	DATE				
N/A		8/5/2009				



KERR-MCGEE OIL & GAS ONSHORE L.P.

1099 18th Street - Denver, Colorado 80202

WELL PAD - LOCATION LAYOUT NBU 922-36M3T, NBU 922-36L3DS, NBU 922-36L4BS, NBU 922-36N4BS LOCATED IN SECTION 36, T.9S., R.22E. S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

1"=60' Date: 1/29/09 SHEET NO: BJV 8/4/09 6 REVISED: 6 OF 13

FINISHED GRADE ELEVATION = 4,967.0' CUT SLOPES = 1.5:1 FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 11,484 C.Y. TOTAL FILL FOR WELL PAD = 10,757 C.Y. TOTAL FILL FOR WELL FAD = 10,737

TOPSOIL @ 6" DEPTH = 2,066 C.Y.

EXCESS MATERIAL = 727 C.Y.

TOTAL DISTURBANCE = 3.72 ACRES

SHRINKAGE FACTOR = 1.10 SWELL FACTOR = 1.00 RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 29,950 BARRELS RESERVE PIT VOLUME +/- 7,780 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD) +/- 11,260 BARRELS BACKFLOW PIT VOLUME +/- 3,040 CY

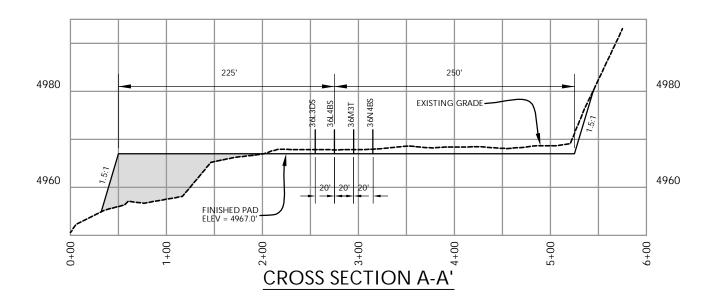


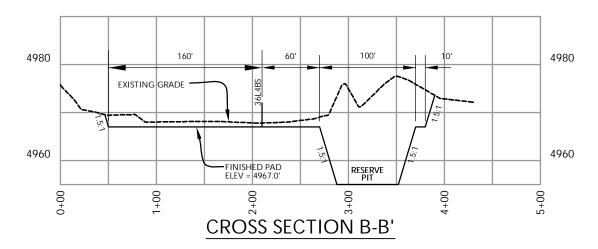
EXISTING WELL LOCATION PROPOSED WELL LOCATION EXISTING CONTOURS (2' INTERVAL) PROPOSED CONTOURS (2' INTERVAL)



HORIZONTAL 2' CONTOURS

Timberline(435) 789-1365 Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078





Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

WELL PAD - CROSS SECTIONS NBU 922-36M3T, NBU 922-36L3DS, NBU 922-36L4BS, NBU 922-36N4BS LOCATED IN SECTION 36, T.9S., R.22E. S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

j	Scale:	1"=100'	Date:	1/29/09	SHEET NO:	
	REVISED:			RAW 5/6/09	7	7 OF 13

HORIZONTAL	0	50	100
VERTICAL	0	10	20

TIMBERLINE (435) 789-1365 ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

	FORM 9				
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	NG	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22650		
	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	sals to drill new wells, significantly deepen ex igged wells, or to drill horizontal laterals. Use		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-36N4BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSI	HORE, L.P.		9. API NUMBER: 43047503670000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Si	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0538 FSL 0453 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSW Section: 36	P, RANGE, MERIDIAN: 5 Township: 09.0S Range: 22.0E Meridian: S		STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud: 8/26/2009	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
0, 20, 2003	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
·	□ WILDCAT WELL DETERMINATION □	OTHER	OTHER:		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELLAccepted by the LOCATION ON 08/26/2009 AT 11:00 HRS. Utah Division of Oil, Gas and Mining FOR RECARD, ONLY					
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst			
SIGNATURE	720 323 0100	DATE			
N/A		8/27/2009			

	FORM 9				
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22650		
SUNDF	RY NOTICES AND REPORTS O	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	sals to drill new wells, significantly deepen ex Igged wells, or to drill horizontal laterals. Use		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-36N4BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047503670000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0538 FSL 0453 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI	P, RANGE, MERIDIAN: 5 Township: 09.0S Range: 22.0E Meridian: S		STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
☐ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	☐ TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
9/4/2009	☐ WILDCAT WELL DETERMINATION ☐	OTHER	OTHER:		
12 DESCRIPE PROPOSED OF CO					
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PROPETRO AIR RIG ON 09/02/2009. DRILLED 12 1/4" SURFACE HOLE TO 2150'. RAN 9 5/8" 36# J-55 SURFACE CSG. CMT W/250 SX PREM CLASS Accepted by the G @15.8 PPG 1.15 YIELD. TAILED CMT W/450 SX PREM CLASS G @15.8 PPG that Division of 1.15 YIELD. WORT. Oil, Gas and Mining FOR RECORD ONLY NAME (PLEASE PRINT) PHONE NUMBER TITLE					
Sheila Wopsock	435 781-7024	Regulatory Analyst			
SIGNATURE N/A		DATE 9/10/2009			

	FORM 9			
	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22650			
SUND	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	sals to drill new wells, significantly deepen exigged wells, or to drill horizontal laterals. Use a		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-36N4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047503670000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0538 FSL 0453 FWL QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSW Section: 36	P, RANGE, MERIDIAN: 5 Township: 09.0S Range: 22.0E Meridian: S		COUNTY: UINTAH STATE: UTAH	
11. CHE	CK APPROPRIATE BOXES TO INDICATE N	NATURE OF NOTICE, REPORT,	OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
Approximate date work will start:	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION	
·	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK	
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
Date of Spud:	☐ REPERFORATE CURRENT FORMATION ☐	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
	☐ TUBING REPAIR ☐	VENT OR FLARE	WATER DISPOSAL	
✓ DRILLING REPORT Report Date:	☐ WATER SHUTOFF ☐	SI TA STATUS EXTENSION	APD EXTENSION	
10/8/2009	□ WILDCAT WELL DETERMINATION □	OTHER	OTHER:	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. FINISHED DRILLING FROM 2,150' TO 9,017 ON 10/05/2009. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS WATER. LEAD CMT W/550 SAccepted by the CLASS G PREM LITE @ 12.4 PPG, 2.03 YIELD. TAILED CMT W/1283 SX CLASDIAN Division of G 50/50 POZ MIX @ 14.3 PPG, 1.31 YIELD. WASHED LINES, DROPPED PLOTI, Gas and Mining BUMP PLUG W/3200 PSI. FLOATS HELD, 20 BBLS TO PIT. HAD GOTTO RECORD ONLY RETURNS THROUGHOUT JOB. RELEASE ENSIGN 145 RIG ON 10/08/2009 AT 03:00 HRS.				
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE Pagulatory Analyst		
Andy Lytle	720 929-6100	Regulatory Analyst		
SIGNATURE N/A		DATE 10/8/2009		

	FORM 9			
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22650	
	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	sals to drill new wells, significantly deepen ıgged wells, or to drill horizontal laterals. L		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-36N4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047503670000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0538 FSL 0453 FWL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSW Section: 36	P, RANGE, MERIDIAN: 5 Township: 09.0S Range: 22.0E Meridian:	S	STATE: UTAH	
11. CHE	CK APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
_	ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING COMMINGLE PRODUCING FORMATIONS	CHANGE WELL NAME	
SUBSEQUENT REPORT	☐ CHANGE WELL STATUS	FRACTURE TREAT	☐ CONVERT WELL TYPE ☐ NEW CONSTRUCTION	
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK	
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL	
✓ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION	
2/1/2010	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 2/1/2010 AT 1:30 P.M. THE CHRONOLOGICAL WELL REPORT WILL BE SUBMITTED WITH THE Accepted by the WELL COMPLETION REPORT. Utah Division of Oil, Gas and Mining FOR RECORD ONLY FOR RECORD ONLY				
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst		
SIGNATURE N/A		DATE 2/1/2010		

STATE OF UTAH AMENDED REPORT FORM 8 DEPARTMENT OF NATURAL RESOURCES (highlight changes) DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 1a. TYPE OF WELL: 7. UNIT or CA AGREEMENT NAME WELL GAS WELL OTHER UTU63047A b. TYPE OF WORK: WELL NAME and NUMBER: DEEP-DIFF. RESVR. NBU 922-36N4BS OTHER 2. NAME OF OPERATOR: 9. API NUMBER: KERR McGEE OIL & GAS ONSHORE LP 4304750367 3. ADDRESS OF OPERATOR: PHONE NUMBER: 10 FIELD AND POOL, OR WILDCAT STATE CO ZIP 80217 P.O. BOX 173779 (720) 929-6100 NATURAL BUTTES CITY DENVER 4. LOCATION OF WELL (FOOTAGES) QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: AT SURFACE: SWSW 538 FSL & 453 FWL SWSW 36 9S 22E AT TOP PRODUCING INTERVAL REPORTED BELOW: SESW 509 FSL & 2044 FWL SEC.36-9S-22E 506 FSL 2084 FWL AT TOTAL DEPTH: SESW 507 FSL & 2083 FWL SEC.36-9S-22E 12. COUNTY 13. STATE UTAH UINTAH 14. DATE SPUDDED: 15. DATE T.D. REACHED: 16. DATE COMPLETED: 17. ELEVATIONS (DF, RKB, RT, GL): ABANDONED READY TO PRODUCE 🗸 8/26/2009 10/5/2009 2/1/2010 4968' GL 18. TOTAL DEPTH: MD 9,017 19. PLUG BACK T.D.; MD 8,953 21. DEPTH BRIDGE 20. IF MULTIPLE COMPLETIONS, HOW MANY? MD PLUG SET: TVD -8.647 8648 TVD 8.583 8 581 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) NO 🗸 CBL-SDL/DSN/ACTR-BHV RMTE WAS WELL CORED? YES (Submit analysis) WAS DST RUN? NO 🔽 YES (Submit report) DIRECTIONAL SURVEYS NO YES 7 (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER **CEMENT TYPE &** SLURRY HOLE SIZE SIZE/GRADE WEIGHT (#/ft.) TOP (MD) BOTTOM (MD) CEMENT TOP ** AMOUNT PULLED DEPTH NO. OF SACKS VOLUME (BBL) 20" 14" STL 36.7# 40 28 12 1/4" 9 5/8 36# J-55 700 2,124 7 7/8" 4 1/2 I-80 11.6# 8.998 1850 25. TUBING RECORD DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) DEPTH SET (MD) SIZE PACKER SET (MD) 2 3/8" 8,552 26. PRODUCING INTERVALS 27. PERFORATION RECORD FORMATION NAME TOP (MD) BOTTOM (MD) TOP (TVD) BOTTOM (TVD) INTERVAL (Top/Bot - MD) SIZE NO. HOLES PERFORATION STATUS (A) MESAVERDE 6,876 8,860 6.876 8.860 0.36 324 Open Squeezed (B) Open Squeezed (C) Open Squeezed (D) 28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND TYPE OF MATERIAL 6,876-8,860 PMP 13.918 BBLS SLICK H20 & 562.175 LBS 30/50 SD 29. ENCLOSED ATTACHMENTS: 30. WELL STATUS: ELECTRICAL/MECHANICAL LOGS ✓ DIRECTIONAL SURVEY GEOLOGIC REPORT DST REPORT PROD SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER: RECEIVED

MAR 08 2010

31. INITIAL PRODUCTION INTERVAL A (As shown in item #26) TEST DATE: DATE FIRST PRODUCED: HOURS TESTED: TEST PRODUCTION OIL - BBL: GAS - MCF: WATER - BBL: PROD. METHOD: RATES: 2/10/2010 2,020 24 247 2/1/2010 CHOKE SIZE: TBG. PRESS. CSG. PRESS. API GRAVITY BTU - GAS GAS/OIL RATIO 24 HR PRODUCTION OIL - BBL: GAS - MCF: WATER - BBL: INTERVAL STATUS: RATES: 20/64 1,716 2,222 0 2,020 247 INTERVAL B (As shown in item #26) DATE FIRST PRODUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION OIL - BBL: GAS - MCF: WATER - BBL: PROD. METHOD: RATES: CHOKE SIZE: TBG. PRESS. CSG. PRESS. API GRAVITY BTU - GAS GAS/OIL RATIO 24 HR PRODUCTION OIL - BBL: GAS - MCF: WATER -- BBL: INTERVAL STATUS: RATES: INTERVAL C (As shown in item #26) DATE FIRST PRODUCED: TEST DATE: HOURS TESTED TEST PRODUCTION OIL - BBI GAS - MCF: WATER - BBL: PROD. METHOD:

5,1121111011111	3 3 3325.			, indexed in Editor		RATES: →	OIL - BBL.	GAO - WOT.	WATER BBE.	T KOD. METHOD.
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS		24 HR PRODUCTION RATES: →	OIL BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:
INTERVAL D (As shown in item #26)										
DATE FIRST PRO	ODUCED:	TEST DATE:		HOURS TESTED		TEST PRODUCTION RATES: →	OIL – BBL:	GAS MCF:	WATER – BBL:	PROD. METHOD:

RATES:

24 HR PRODUCTION OIL - BBL:

GAS/OIL RATIO

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

CSG. PRESS.

SOLD

CHOKE SIZE:

33. SUMMARY OF POROUS ZONES (Include Aquifers):

TBG. PRESS.

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

API GRAVITY

BTU - GAS

34. FORMATION (Log) MARKERS:

GAS - MCF:

WATER -- BBL:

FLOWING

PROD

INTERVAL STATUS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER MAHOGANY WASATCH MESAVERDE	1,126 1,746 4,181 6,352	6,352 8,863			

35. ADDITIONAL REMARKS (Include plugging procedure)

ATTACHED TO THIS COMPLETION REPORT IS THE CHRONOLOGICAL WELL HISTORY AND EOWR.

	· · · · · · · · · · · · · · · · · · ·
NAME (DI SACE PRINT) ANDY LYTLE	REGULATORY ANALYST

3/1/2010 SIGNATURE DATE

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

801-359-3940 Fax.

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 922-36M Pad NBU 922-36N4BS OH

Design: OH

Standard Survey Report

14 October, 2009

Survey Report

Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well: NBU 922-36M Pad NBU 922-36N4BS

Wellbore: Design:

OH

OH

Local Co-ordinate Reference:

Well NBU 922-36N4BS

TVD Reference: GL 4967' & RKB 14' @ 4981.00ft (Ensign 145) MD Reference: GL 4967' & RKB 14' @ 4981.00ft (Ensign 145)

North Reference:

Survey Calculation Method:

Database:

Minimum Curvature

EDM 2003.16 Multi-User Db

Project

Uintah County, UT UTM12

Map System:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 - Western US

System Datum:

Mean Sea Level

Geo Datum: Map Zone:

Zone 12N (114 W to 108 W)

Site

NBU 922-36M Pad, Sec 36 T9S R22E

Site Position: From:

Northing:

14,525,279.08 ft

Latitude:

39° 59' 12.432 N

Lat/Long

Easting:

2,089,949.89 ft

Longitude:

Position Uncertainty:

0.00 ft

Slot Radius:

109° 23' 42.737 W

Grid Convergence:

1.03°

Well

NBU 922-36N4BS, 538' FSL & 453' FWL

Well Position

+N/-S +E/-W 0.00 ft 0.00 ft Northing: Easting:

14,525,268.09 ft 2,089,889.99 ft Latitude: Longitude: 39° 59' 12.334 N

Position Uncertainty

0.00 ft

Wellhead Elevation:

fŧ

Ground Level:

109° 23' 43.509 W 4,967.00 ft

Wellbore

ОН

Magnetics

Model Name

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2005-10

8/17/2009

11.25

65.93

52,547

Design

Audit Notes:

Version:

1.0

OH

Phase:

ACTUAL

Tie On Depth:

10.00

154.50

Vertical Section:

Depth From (TVD) (ft)

10.00

+N/-S (ft) 0.00

+E/-W (ft) 0.00

Direction (°)

Survey Program

Date 10/14/2009

From (ft)

168.00

968.00

To (ft)

Survey (Wellbore)

2,108.00 Survey #1 - Surface (OH)

9,017.00 Survey #2 (OH)

0.92

Tool Name MWD SDI

MWD SDI

Description

MWD - Standard ver 1.0.1 MWD - Standard ver 1.0.1

0.36

0.14

-22.52

2,165.00

Survey

Measured Vertical Depth Depth Inclination Azimuth +N/-S

186.80

967.96

Vertical Doglea Build Turn +E/-W Section Rate Rate Rate (ft) (ft) (ft) (°/100ft) (°/100ft) (°/100ft) (°) (°) (ft) (ft) 10.00 0.00 0.00 10.00 0.00 0.00 0.00 0.00 0.00 0.00 168.00 0.50 263.88 168.00 -0.07 -0.69 -0.23 0.32 0.32 0.00 First SDI Surface MWD Survey 258.00 0.38 274.14 258 00 -0.09 -1.37-0.510.16 -0.1311.40 348.00 0.20 284.56 347.99 -0.03 -1.82 -0.76 0.21 -0.20 11.58 438.00 0.20 286.75 437 99 0.05 -2.13 -0.960.01 0.00 2.43 518.00 0.45 227.81 -0.12 517.99 -2.49-0.97 0.48 0.31 -73.67 608.00 0.39 237.26 607.99 -0.52 -3.01 -0.83 0.10 -0.07 10.50 698.00 0.62 228.85 697.99 -1.01 -3.64 -0.660.27 0.26 -9.34 788.00 0.69 193.27 787.98 -1.86 -4.13-0.10 0.45 0.08 -39.53 878.00 0.79 207.07 877.97 -2.94-4.53 0.70 0.23 0.11 15.33

-4.90

1.69

-4.21

Survey Report

Company: Project:

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 Site: NBU 922-36M Pad

Well:

NBU 922-36N4BS

Wellbore: ОН Design: ОН

Local Co-ordinate Reference:

TVD Reference: MD Reference:

Well NBU 922-36N4BS

GL 4967' & RKB 14' @ 4981.00ft (Ensign 145) GL 4967' & RKB 14' @ 4981.00ft (Ensign 145)

North Reference:

Survey Calculation Method: Database:

Minimum Curvature

EDM 2003.16 Multi-User Db

rvey			· · · · · · · · · · · · · · · · · · ·							
	Manager			Marking I			37-41-1	DI		
	Measured			Vertical			Vertical	Dogleg	Build	Turn
	Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
	1,058.00	0.98	160.82	1,057.95	-5.65	-4.73	3.06	0.48	0.07	-28.87
	1,148.00	1.57	126.14	1,147.93	-7.10	-3.49	4.91	1.05	0.66	-38.53
	1,238.00	2,14	109.53	1,237.88	-8.39	-0.91	7.18	0.86	0.63	-18.46
	1,328.00	1.80	113.96	1,327.83	-9.53	1.97	9.45	0.41	-0.38	4.92
	•									
	1,418.00	1.31	133.67	1,417.80	-10.81	4.00	11.48	0.80	-0.54	21.90
	1,508.00	1.41	133.67	1,507.77	-12.29	5.55	13.48	0.11	0.11	0.00
	1,598.00	1.37	143.94	1,597.75	-13.92	6.98	15.57	0.28	-0.04	11.41
	1,688.00	0.90	131.31	1,687.73	-15.26	8.15	17.28	0.59	-0.52	-14.03
	1,778.00	0.93	157.47	1,777.72	-16.40	8.96	18.66	0.46	0.03	29.07
	1,868.00	0.98	153.30	1,867.70	-17.76	9.58	20.16	0.10	0.06	-4,63
	1,958.00	1.10	168.60	1,957.69	-19.30	10.10	21.77	0.33	0.13	17.00
	2,048.00	1.21	168.89	2,047.67	-21.08	10.46	23.52	0.12	0.13	0.32
	2,108.00	1.30	169.79	2,107.66	-22.37	10.70	24.79	0.15	0.12	1.50
		face MWD Surve		2,107.00	22.01	10.70	2-4.70	0.10	0.10	1.50
			•	0.404.04	00.50	40.07	00.00	0.07	0.40	0.75
	2,165.00	1.19	164.80	2,164.64	-23.58	10.97	26.00	0.27	-0.19	-8.75
	First SDI Pro	duction MWD S	urvey							
	2,255.00	2.90	135.80	2,254.58	-26.11	12.80	29.08	2.16	1.90	-32.22
	2,346.00	5.00	121.59	2,345.37	-29.84	17.78	34.59	2.53	2.31	-15.62
	2,436.00	6.81	110.58	2,434.89	-33.77	26.12	41.72	2.36	2.01	-12.23
	2,526.00	8.68	103.63	2,524.06	-37.24	37.72	49.86	2.32	2.08	-7.72
	2,618.00	12.03	93.68	2,614.56	-39.50	54.04	58.92	4.11	3.64	-10.82
	·		30.00	2,014.00				7.11		-10.02
	2,708.00	14.89	90.07	2,702.08	-4 0.11	74.97	68.48	3.31	3.18	-4.01
	2,799.00	18.32	86.67	2,789.27	-39.30	100.94	78.93	3.92	3.77	-3.74
	2,889.00	20.61	90.65	2,874.13	-38.65	130.91	91.26	2.94	2.54	4.42
	2,980.00	22.08	89.64	2,958.88	-38.73	164.03	105.58	1.67	1.62	-1.11
	3,070.00	22.82	92.17	3,042.07	-39.28	198.39	120.88	1.35	0.82	2.81
	3,161.00	26.57	94.27	3,124.73	-41.47	236.33	139.19	4,23	4.40	0.04
	3,251.00	29.67	94.27 91.72	3,204.10	-43.64		159.19	4,23 3.69	4.12	2.31
	3,342.00			3,282.30		278.68			3.44	-2.83
		31.88	85.22		-42.31	325.16	178.19	4.39	2.43	-7.14
	3,432.00	34.48	87.63	3,357.62	-39.27	374.30	196.62	3.24	2.89	2.68
	3,523.00	30.99	85.59	3,434.16	-36.41	423.42	215.18	4.02	-3.84	-2.24
	3,614.00	32.15	87.68	3,511.70	-33.62	470.97	233.14	1.75	1.27	2.30
	3,704.00	30.42	89.67	3,588.61	-32.52	517.69	252.26	2.24	-1.92	2.21
	3,795.00	27.95	91.11	3,668.05	-32.80	562.05	271.62	2.82	-2.71	1.58
	3,885.00	30.83	87.85	3,746.46	-32.35	606.20	290.22	3.66	3.20	-3.62
	3,976.00	30.90	86.86	3,824.58	-30.19	652.83	308.35	0.56	0.08	-1.09
	4,066.00	30.04	92.30	3,902.16	-29.83	698.42	327.66	3.21	-0.96	6.04
	4,157.00	30.37	93.43	3,980.81	-32.12	744.15	349.41	0.72	0.36	1.24
	4,247.00	28.40	94.90	4,059.23	-35.31	788.19	371.26	2.33	-2.19	1.63
	4,338.00	27.69	92.62	4,139.54	-38.13	830.87	392.18	1.41	-0.78	-2.51
	4,429.00	28.82	93.30	4,219.70	-40.36	873.89	412.71	1.29	1.24	0.75
	4,519.00	29.17	91.93	4,298.42	-42.34	917.47	433.27	0.83	0.39	-1.52
	4,610.00	30.19	88.66	4,377.48	-42.55	962.51	452.86	2.10	1.12	-3.59
	4,700.00	29.92	86.88	4,455.39	-40.80	1,007.55	470.67	1.03	-0.30	-1.98
	4,791.00	29.28	88.36	4,534.51	-38.93	1,052.46	488.31	1.07	-0.70	1.63
	4,882.00	28.30	87.62	4,614.26	-37.40	1,096.25	505.79	1.15	-1.08	-0.81
										-0.01
	4,972.00	30.06	90.24	4,692.84	-36.61	1,140.11	523.96	2.42	1.96	2.91
	5,063.00	29.71	91.48	4,771.74	-37.29	1,185.45	544.09	0.78	-0.38	1.36
	5,153.00	28.31	91.91	4,850.45	-38.57	1,229.08	564.04	1.57	-1.56	0.48
	5,244.00	27.37	92.03	4,930.91	-40.03	1,271.55	583.65	1.03	-1.03	0.13
	5,334.00	25.59	91.23	5,011.47	-41.18	1,311.66	601.96	2.02	-1.98	-0.89
				,		•				
	5,425.00	23.92	86.53	5,094.11	-40.49	1,349.73	617.72	2.84	-1.84	-5.16
	5,516.00 5,606.00	22.47 20.46	87.08 87.57	5,177.75 5,261.51	-38.49 -36.94	1,385.51 1,418.41	631.32 644.09	1.61 2.24	-1.59 -2.23	0.60 0.54

Survey Report

Company: Project:

Kerr McGee Oil and Gas Onshore LP

Site:

Uintah County, UT UTM12

NBU 922-36M Pad NBU 922-36N4BS Well:

Wellbore: ОН Design: ОН Local Co-ordinate Reference:

TVD Reference: MD Reference:

Well NBU 922-36N4BS

GL 4967' & RKB 14' @ 4981.00ft (Ensign 145) GL 4967' & RKB 14' @ 4981.00ft (Ensign 145)

North Reference:

Survey Calculation Method:

Database:

Minimum Curvature

EDM 2003.16 Multi-User Db

Su	rve	v

Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
5,697.00	18.85	88.21	5,347.20	-35.81	1,448.99	656.24	1.78	-1.77	0.70
5,787.00	17.05	89.75	5,432.82	-35.30	1,476.72	667.72	2.07	-2.00	1.71
5,878.00	15.16	85.72	5,520.24	-34.35	1,501.93	677.72	2.41	-2.08	-4.43
5,968.00	13.20	86.19	5,607.50	-32.79	1,523.92	685.78	2.18	-2.18	0.52
6,059.00	11.73	87.83	5,696.35	-31.75	1,543.53	693.28	1.66	-1.62	1.80
6,150.00	10.61	89.30	5,785.63	-31.30	1,561.15	700.46	1.27	-1.23	1.62
6,240.00	9.94	84.75	5,874.18	-30.48	1,577.17	706.63	1.17	-0.74	-5.06
6,331.00	8.03	81.72	5,964.06	-28.85	1,591.29	711.23	2.16	-2.10	-3.33
6,421.00	6.01	82.45	6,053.38	-27.33	1,602.18	714.54	2.25	-2.24	0.81
6,512.00	5.17	86.24	6,143.95	-26.43	1,610.99	717.53	1.01	-0.92	4.16
6,602.00	4.87	85.63	6,233.61	-25.87	1,618.85	720.41	0.34	-0.33	-0.68
6,693.00	3.36	55.27	6,324.38	-24.06	1,624.89	721.38	2.86	-1.66	-33.36
6,783.00	1.98	38.53	6,414.28	-21.34	1,628.03	720.27	1.75	-1.53	-18.60
6,874.00	0.57	355.09	6,505.26	-19.66	1,628.97	719.16	1.77	-1.55	-47.74
6,964.00	0.31	11.53	6,595.25	-18.97	1,628.98	718.55	0.32	-0.29	18.27
7,055.00	0.24	129.69	6,686.25	-18.86	1,629.18	718.52	0.52	-0.08	129.85
7,146.00	0.38	204.41	6,777.25	-19.25	1,629.20	718.89	0.43	0.15	82.11
7,236.00	0.56	211.20	6,867.25	-19.90	1,628.85	719.33	0.21	0.20	7.54
7,327.00	0.68	202.98	6,958.24	-20.78	1,628.41	719.93	0.16	0.13	-9.03
7,417.00	0.95	186.69	7,048.23	-22.01	1,628.11	720.91	0.39	0.30	-18.10
7,508.00	0.68	10.00	7,139.23	-22.23	1,628.12	721.11	1.79	-0.30	-194.16
7,598.00	0.67	30.26	7,229.23	-21.25	1,628.47	720.38	0.26	-0.01	22.51
7,689.00	0.27	112.40	7,320.22	-20.87	1,628.94	720.24	0.76	-0.44	90.26
7,779.00	0.64	186.97	7,410.22	-21.45	1,629.08	720.82	0.69	0.41	82.86
7,870.00	0.83	186.05	7,501.21	-22.61	1,628.94	721.81	0.21	0.21	-1.01
7,960.00	0.36	301.07	7,591.21	-23.11	1,628.63	722.13	1.15	-0.52	127.80
8,051.00	0.27	241.07	7,682.21	-23.07	1,628.20	721.91	0.36	-0.10	-65.93
8,142.00	0.38	291.97	7,773.21	-23.06	1,627.73	721.70	0.33	0.12	55.93
8,232.00	0.44	256.30	7,863.21	-23.03	1,627.12	721.41	0.29	0.07	-39.63
8,321.00	0.47	287.91	7,952.20	-23.00	1,626.44	721.08	0.28	0.03	35.52
8,414.00	0.11	288.99	8,045.20	-22.85	1,625.99	720.76	0.39	-0.39	1.16
8,504.00	0.71	152.48	8,135.20	-23.32	1,626.17	721.26	0.88	0.67	-151.68
8,595.00	1.12	153.03	8,226.19	-24.61	1,626.83	722.71	0.45	0.45	0.60
8,685.00	1.14	154.37	8,316.17	-26.20	1,627.62	724.48	0.04	0.02	1.49
8,776.00	1.19	150.31	8,407.15	-27.84	1,628.48	726.33	0.11	0.05	-4.46
8,866.00	0.89	155.18	8,497.14	-29.28	1,629.24	727.96	0.35	-0.33	5.41
8,955.00	1.14	141.62	8,586.12	-30.61	1,630.08	729.52	0.39	0.28	-15.24
Last SDI Por	duction MWD S	urvey							
9,017.00	1.14	141.62	8,648,11	-31.57	1,630.84	730.72	0.00	0.00	0.00

Survey Report

Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well: NBU 922-36M Pad NBU 922-36N4BS

Wellbore: Design:

ОН ОН Local Co-ordinate Reference:

TVD Reference:

Database:

MD Reference:

Well NBU 922-36N4BS

GL 4967' & RKB 14' @ 4981.00ft (Ensign 145) GL 4967' & RKB 14' @ 4981.00ft (Ensign 145)

North Reference: **Survey Calculation Method:**

Minimum Curvature

EDM 2003.16 Multi-User Db

Targets			-						
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 922-N4BS PBHL - actual wellpath mis - Circle (radius 25.0		0.00 nter by 17.80	8,600.00 ft at 8955.00	-30.70 ft MD (8586.1	1,641.22 2 TVD, -30.61	14,525,266.93 N, 1630.08 E)	2,091,531.50	39° 59' 12.030 N	109° 23' 22.421 W

Me	asured	Vertical	Local Coordin	ates	
	Depth	Depth	+N/-S	+E/-W	
	(ft)	(ft)	(ft)	(ft)	Comment
	168.00	168.00	-0.07	-0.69	First SDI Surface MWD Survey
	2,108.00	2,107.66	-22.37	10.70	Last SDI Surface MWD Survey
	2,165.00	2,164.64	-23.58	10.97	First SDI Production MWD Survey
	8,955.00	8,586.12	-30.61	1,630.08	Last SDI Porduction MWD Survey
	9,017.00	8,648.11	-31.57	1,630.84	Projection To TD

Checked By:	Approved By:	Date:
1		

			o				EGION ary Report			
Well: NRU 92	2-36N4BS (GREI	EN)	Spud Co	onducto	r: 8/26/20	009	Spud Date: 9/2/2009			
Project: UTAH					6M PAD		Rig Name No: PROPETRO/, ENSIGN 145/145			
Event: DRILLI			Start Da				End Date: 10/8/2009			
	RKB @4,981.00	ft (above Mear				1/9/5/22/	0/0/26/PM/S/538.00/W/0/453.00/0/0			
Date	Time	Duration	Phase	Code		P/U	MD From Operation			
Date	Start-End	(hr)	Filase	Code	Code	г/О	(ft) Operation			
9/2/2009	11:30 - 21:00		DRLSUR	01	Α _	P	MOVE PROPETRO 12 TO THE NBU-922-36M PAD 35 MILE MOVE DUG WAY IN ROUGH CONDITION,			
	21:00 - 22:00 22:00 - 22:30		DRLSUR	01	В	Р	R/U PROPETRO 12,BLOOY LINE,AIR BOWL COMP; BOOSTER			
	22:30 - 23:30		DRLSUR	06	A	P	P/U HAMMER - TOOLS			
			DRLSUR	02	A	P	DRL F/ 44' TO 180'			
0/0/0000	23:30 - 0:00	0.50	DRLSUR	06	A	P	L/D HAMMER			
9/3/2009	0:00 - 2:00	2.00	DRLSUR	06	Α	P	P/U BIT - TOOLS			
	2:00 - 4:00	2.00	DRLSUR	02	D	P	SPUD BIT 09/03/09 @ 02:00 DRL F/180' TO 330' DRL W/AIR MIST			
	4:00 - 6:00	2.00	DRLSUR	06	H	P	MWD FAILURE TRIP OUT, CHECK TOOLS			
	6:00 - 10:30 10:30 - 0:00		DRLSUR	21	D	Р	TROUBLE SHOOT MWD EQUIP, REPLACED ANTENA, AND REPROGRAMED COMPUTER			
0/4/0000	0:00 - 8:30	13.50		02	D	P	DRL F/ 330' TO 1610' ROTATE- SLIDE TOTAL -18'			
9/4/2009	8:30 - 9:30	8.50 1.00	DRLSUR DRLSUR	02 05	В	P P	DRL F/ 1910' TO 2150' T.D ROTATE SLIDE -SLIDE F/ 1640' TO 1648' 12BBLS MIN, 2200 CFM CIRC TO L/D TOOLS			
	9:30 - 13:30		DRLSUR	06	A	P	L/D TOOLS AND BIT			
	13:30 - 16:00		DRLSUR	12	C	P				
			DICEOUN	12	C	Г	R/U RUN 48 JOINTS J-55 -36# CSNG SHOE AT 2115' - BAFFLE AT - 2071' RELEASE RIG @16:30 9-4-09			
	16:00 - 18:00		DRLSUR	12	E	Р	CMNT SURFACE -TAIL - 250 SX 15.8# 1.15 YLD, 450SX 15.8# 1.15 YLD ON TOP OUTS FLOAT HELD			
9/27/2009	0:00 - 1:00	1.00	RDMO	01	Α	P	RIG DOWN FLOOR, PREPARE TO MOVE.			
	1:00 - 4:00	3.00	RDMO	01	A	Р	WALK RIG BACK 40', TIGHTEN BOLTS ON HYD RAM TO SUB.			
	4:00 - 12:00		RDMO	01	A	Р	SPLIT BLOCKS FROM TOP DRIVE, UN PIN IDM & BOARD, RAISE BOARD, REMOVE RAM COVERS, PULL WIND WALLS. HELD DRIVERS MEETING AT 09:00 AM. LOAD OUT BACK YARD, UNPLUG AND ROLL UP ELECTRIC CORDS AND SECURE CATERPILLAR, LOWER MUD/GAS SEP.			
	12:00 - 19:30 19:30 - 0:00	7.50 4.50	RDMO RDMO	01	A A	P P	BLEED HYDRAULIC SYSTEM, LAY DOWN THE DERRICK. UNSTRING THE BLOCKS, LAND DERRICK ON DOLLY, BREAK DERRICK CROWN SECTION. SET MATS ON NEW LOCATION, SET IN PUMPS AND BOILER, SET MUD TANKS. RU PUMP SUCTIONS AND ELECTRICAL TO MUD			
		4.50	TONIO	01	7	į.	PITS. SDFN. 80% MOVED, 10% RU.			
9/28/2009	0:00 - 7:00	7.00	MIRU	01	Α	Р	WAIT ON DAYLIGHT.			
	7:00 - 21:00	14.00	MIRU	01	А	Р	ROAD RIG SUB AND DERICK INTO LOCATION. BUILD SUB, PIN DERRICK. SET BULK HOPPER, COMBO HOUSE AND VFD. HOOK UP ELECTRICAL. STRING BLOCKS. PREPARE TO RAISE THE DERRICK.			
0/20/2000	21:00 - 0:00	3.00	MIRU	08	A	Z	STARTED STRINGING UP THE BLOCKS, BLOCKS SHIFTED ON RAIL AND FELL TO THE GROUND. WAIT ON A POLE TRUCK TO INSTALL THE BLOCKS ON THE SKID RAIL.			
9/29/2009	0:00 - 1:00	1.00	MIRU	08	A	Z	REHANG THE BLOCKS TO THE RAIL.			
	1:00 - 6:00	5.00	MIRU	01	Α	Р	STRING THE BLOCKS, RAISE THE DERRICK @ 04:00. RIG UP WIND WALLS. RURT, PLUG IN PLC COMM.			

3/2/2010

9:41:06AM

Operation Summary Report

Nell: NBU 922	2-36N4BS (GREEN	1)	Spud Co	onductor	: 8/26/20	09	Spud Date: 9/2	//2009		
Project: UTAH	I-UINTAH		Site: NB	U 922-3	6M PAD			Rig Name No: PROPETRO/, ENSIGN 145/145		
Event: DRILLI	NG		Start Da	te: 7/21/	2009			End Date: 10/8/2009		
Active Datum:	RKB @4,981.00ft	above Mea	n Sea Leve	UWI: S	W/SW/0	/9/S/22/E	/36/0/0/26/PM/S	6/538.00/W/0/453.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
	6:00 - 15:00	9.00	MIRU	01	A	Р		SPOOL 3 ROWS AND 31 WRAPS DRILL LINE ON DRUM, SET ANCHOR, UNPIN BLOCKS, HOOK UP BECKET TO TOP DRIVE. RU FLARE LINES, CHOKE LINES AND HYDRAULICS.		
	15:00 - 17:00	2.00	MIRU	80	В	Z		REMOVE THE BLOCK STABILIZER GUIDES FROM THE BLOCKS (DAMAGED WHEN DROPPED)		
	17:00 - 20:00	3.00	MIRU	01	Α	Р		FINISH HOOKING UP FLARE LINES, VIBRATOR HOSES, FLOW LINES.		
	20:00 - 0:00	4.00	MIRU	15	А	Р		HELD SAFETY MEETING WITH TESTER, TEST PIPE RAMS, BLIND RAMS, FLOOR VALVES, CHOKE, CHOKE MANIFOLD AND ALL RELATED VALVES TO 250 AND 5000 PSI. TEST HYDRIL TO 250 AND 2500 PSI.		
9/30/2009	0:00 - 1:00	1.00	DRLPRO	15	Α	Р		FINISH TESTING BOP, TEST CASING T 1500 PSI FOR 30 MINUTES.		
	1:00 - 1:30	0.50	DRLPRO	14	В	Р		INSTALL WEAR BUSING		
	1:30 - 5:00	3.50	DRLPRO	06	Α	Р		STRAP AND PU HTC Q506F ON 6 1/2" 1.75 DEG BH, 6/7 LOBE, 2.2 STAGE EFT MOTOR AND MWE TOOLS ON 25 JT. HWDP.		
	5:00 - 5:30	0.50	DRLPRO	80	В	Р		RECALIBRATE PICO		
	5:30 - 7:30	2.00	DRLPRO	06	Α	Р		TIH PICKING UP SINGLES OFF THE RACK. TAG CMT AT 2012.		
	7:30 - 8:30	1.00	DRLPRO	02	F	Р		DRILL CMT, FLOAT & SHOE 2012-2110		
	8:30 - 12:00 12:00 - 13:30	3.50 1.50	DRLPRO	02 21	D D	P Z		DRILL & SLIDE 2110 - 2372, WOB-12-23, SPP-ON/OFF BOTTOM-1510/, GPM-484, MOTOR RPM-106, ROTARY RPM-120, BH RPM-226, TORQUE ON/OFF BOTTOM-13/4, DIFF-120/360, MW-8.4, VIS-26		
	13:30 - 17:30	4.00						WORK ON MWD TOOL PROBLEM		
	17:30 - 18:00	0.50	DRLPRO	08	A	Z		TROUBLE SHOOT TOP DRIVE BLOWER MOTOR, TRIPPING OUT, FOUND BLOWER RECEIPT BURNED IN DRIVE HOUSE PLUG BOARD DUE TO WATER ACCUMULATION ON RECEPTICAL, POWERED DOWN RIG, FOUND CONDENSATION OFF AIR CONDITIONERS ENTERING DRIVE HOUSE, SILICONE ALL ENTRY POINTS POSSIBL & REWIRED RECEPTICAL.		
	18:00 - 0:00	6.00	DRLPRO	02	D	P		DRILL & SLIDE 2372 -2851 , WOB-18-25,		
	0.00	0.00	DICE NO	UL.	D	'		SPP-ON/OFF BOTTOM-1510/, GPM-484, MOTOR RPM-106, ROTARY RPM-120, BH RPM-226, TORQUE ON/OFF BOTTOM-14/4, DIFF-120/360, MW-8.4, VIS-26		
10/1/2009	0:00 - 12:00	12.00	DRLPRO	02	D	P		DRILL & SLIDE 2851- 3764 , WOB-18-25, SPP-ON/OFF BOTTOM-1592/ 1398, GPM-484, MOTOR RPM-106, ROTARY RPM-120, BH RPM-2: TORQUE ON/OFF BOTTOM-19/5, DIFF-138/390, MW-8.4, VIS-26, BGG-430, 3-5' LAZY FLARE CONTINUOUS		
	12:00 - 12:30	0.50	DRLPRO	02	D	Р		LUBRICATE RIG		
	12:30 - 0:00	11.50	DRLPRO	02	D	Р		DRILL & SLIDE 3764- 4492, WOB-18-25, SPP-ON/OFF BOTTOM-1512/ 1380, GPM-484, MOTOR RPM-106, ROTARY RPM-120, BH RPM-22 TORQUE ON/OFF BOTTOM-19/5, DIFF-138/390, MW-8.4, VIS-26, BGG-230-400, 3-5' LAZY FLARE CONTINUOUS		

3/2/2010

9:41:06AM

Operation Summary Report

	-36N4BS (GREE	=N)	Spud Co				Spud Date: 9/2/2009
Project: UTAH-	UINTAH		Site: NB	U 922-3	6M PAD		Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLIN	IG .		Start Da	te: 7/21/	2009		End Date: 10/8/2009
Active Datum: I	RKB @4,981.00f	ft (above Mear	n Sea Leve	UWI: S	W/SW/C)/9/S/22	/E/36/0/0/26/PM/S/538.00/W/0/453.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
10/2/2009	0:00 - 15:00	1777	DRLPRO	02	D	Р	DRILL & SLIDE 4492 TO 5757, WOB-18-25, SPP-ON/OFF BOTTOM-1884/1120, GPM-484, MOTOR RPM-106, ROTARY RPM-35, BH RPM-141, TORQUE ON/OFF BOTTOM-16/5, DIFF-195/470, MW-8.4, VIS-26, BGG-350-450, 3-5' LAZY FLARE CONTINUOUS
	15:00 - 15:30		DRLPRO	07	Α	P	LUBRICATE RIG
	15:30 - 0:00		DRLPRO	02	D	Р	DRILL & SLIDE 5757TO 6401, WOB-18-25, SPP-ON/OFF BOTTOM-1512/ 1380, GPM-484, MOTOR RPM-106, ROTARY RPM-35, BH RPM-141, TORQUE ON/OFF BOTTOM-15/5, DIFF-150/480, MW-8.4, VIS-26, BGG-300/450, 3-5' LAZY FLARE INTERMITANT
10/3/2009	0:00 - 13:00		DRLPRO	02	D	Р	DRILL & SLIDE 6401TO 7024, WOB-18-25, SPP-ON/OFF BOTTOM-1512/ 1380, GPM-484, MOTOR RPM-106, ROTARY RPM-35, BH RPM-141, TORQUE ON/OFF BOTTOM-15/5, DIFF-150/480, MW-9.1, VIS-30, BGG-150-250, 3-5' LAZY FLARE INTERMITANT
	13:00 - 13:30		DRLPRO	07	Α	Ρ	LUBRICATE RIG
	13:30 - 0:00	10.50	DRLPRO	02	D	Р	DRILL & SLIDE 7024 TO 7525, WOB-18-25, SPP-ON/OFF BOTTOM-2425/ 1830, GPM-484, MOTOR RPM-106, ROTARY RPM-35, BH RPM-141, TORQUE ON/OFF BOTTOM-16/7, DIFF-150/480, MW-10.5, VIS-35, BGG-50-60,
10/4/2009	0:00 - 12:00 12:00 - 12:30		DRLPRO	02	D	P	DRILL & SLIDE 7525 TO 8111, WOB-18-25, SPP-ON/OFF BOTTOM-2425/ 1830, GPM-484, MOTOR RPM-106, ROTARY RPM-35, BH RPM-141, TORQUE ON/OFF BOTTOM-16/7, DIFF-150/480, MW-10.5, VIS-35, BGG-50-60,
	12:30 - 12:30		DRLPRO	07	A	Р	LUBRICATE RIG
			DRLPRO	02	D	Р	DRILL & SLIDE 8111TO 8303, WOB-18-25, SPP-ON/OFF BOTTOM-2425/ 1830, GPM-484, MOTOR RPM-106, ROTARY RPM-35, BH RPM-141, TORQUE ON/OFF BOTTOM-20/7, DIFF-100-250, MW-11.6, VIS-38, BGG-50-60,
	19:00 - 20:00		DRLPRO	05	F	Р	PUMP SWEEP, CIRC HOLE
	20:00 - 0:00	4.00	DRLPRO	06	Α	Р	POOH FOR BIT
10/5/2009	0:00 - 1:30		DRLPRO	06	Α	P	POOH W/ BHA
	1:30 - 3:00 3:00 - 8:30		DRLPRO	06 06	A A	P	LD MOTOR & BIT, PU NEW MOTOR & BIT, DIR WORK TIH W/ BHA, HIT BRIDGE AT 6034, WASH & REAM
	8:30 - 23:30	45.00	DDI DDO	00	_	_	TO 6119.
	23:30 - 0:00	0.50	DRLPRO	02 05	D F	P P	DRILL & SLIDE 8303, WOB-18-25, SPP-ON/OFF BOTTOM-2704/ 2440, GPM-484, MOTOR RPM-106, ROTARY RPM-35, BH RPM-141, TORQUE ON/OFF BOTTOM-22/7, DIFF-100-250, MW-12.3, VIS-42, 5 % LCM, BGG-50-280, TD AT 23:30- 9017' PUMP SWEEPS, CIRC HOLE
10/6/2009	0:00 - 3:00		DRLPRO	05 05	F	P	PUMP SWEEPS, CIRC HOLE PUMP SWEEPS, CIRC 2 BOTTOMS UP
101012003	3:00 - 10:00		DRLPRO	06	E	P	WIPER TRIP TO SHOE
	10:00 - 12:00		DRLPRO	08	В	Z	DRAW WORKS SHUT DOWN, ENCODER CARD FAILED, TROUBLE SHOOT & REPLACED SAME
	12:00 - 15:30	3.50	DRLPRO	06	Ε	Р	WIPER TRIP
	15:30 - 16:30	1.00	DRLPRO	03	Α	Р	REAM 8838 TO 9017
	16:30 - 18:30	2.00	DRLPRO	05	F	P	PUMP SWEEPS, CIRC HOLE
	18:30 - 0:00		DRLPRO	06	Α	P	POOH FOR LOGS
10/7/2009	0:00 - 4:00		DRLPRO	06	Α	P	POOH FOR LOGS, LD DIRECTIONAL
	4:00 - 5:00	1.00	DRLPRO	11	D	Р	HOLD SAFETY MEETING, RU LOGGERS

3/2/2010

9:41:06AM

				0				EGION ary Report
Well: NBU 922	2-36N4B	S (GREEN)	Spud Co	nductor	: 8/26/20	009	Spud Date: 9/2/2009
Project: UTAH	I-UINTAF	+		Site: NBI	U 922-3	6M PAD		Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLI	Start Dat	te: 7/21/	2009		End Date: 10/8/2009			
Active Datum:	RKB@4	4,981.00ft (a	above Meai	n Sea Leve	UWI: S	W/SW/C)/9/S/22/E	E/36/0/0/26/PM/S/538.00/W/0/453.00/0/0
Date	and the state of the	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
		- 9:00	4.00	DRLPRO	11	D	Р	RUN OPEN HOLE LOGS, BRIDGED OUT AT 4980, LOGGED OUT FROM THERE
		- 10:00	1.00	DRLPRO	12	A	Р	HOLD SAFETY MEETINGRU CSG CREW
		- 18:00	8.00	DRLPRO	12	Α	Р	RUN 207 JTS 4 1/2, I-80, 11.6#, BTC, SHOE AT 8985.70, FC AT 8939.98
		- 20:30	2.50	DRLPRO	05	Α	Р	CIRC F/ CMNT
		- 23:30	3.00	DRLPRO	12	Е	Р	SAFETY MTNG W/ BJ, TEST LINES,CMNT 4 1/2 ,40 BBLS WATER,LEAD-550SX PL2 @ 12.4# W/ 2.03 YLD, TAIL - 1283SX 50/50 POZ @ 14.3# 1.31 YLD, WASHED LINES DROPPED PLUG, BUMP PLUG W/ 3200 PSI FLOATS HELD , 20 BBLS CMNT TO PIT, TO PIT HAD GOOD RETURNS THROUGH OUT JOB
		- 0:00	0.50	DRLPRO	12	В	Р	WASH STACK LAND CSNG W/ 80 K
10/8/2009	0:00	- 3:00	3.00	DRLPRO	14	Α	Р	NIPPLE DOWN BOPE,FLOW LINE, FCT, RELEASE RIG 10-08-09 03:00 HRS

Operation Summary Report

Well: NBU 922-	-36N4BS (GREE	N)	Spud Co	nductor	8/26/20	009	Spud Date: 9/2/2009
Project: UTAH-	UINTAH		Site: NB	U 922-3	6M PAD		Rig Name No: LEED 698/698
Event: COMPL	ETION		Start Dat	te: 12/4/	2009		End Date:
Active Datum: I	RKB @4,981.00ft	(above Mean	Sea Leve	ve UWI: SW/SW/0/9/S/22/			36/0/0/26/PM/S/538.00/W/0/453.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
12/4/2009	-						
12/23/2009	7:00 - 15:00	8.00	COMP	37	B	Р	MIRU B&C QUICK TEST. PSI TEST CSG & BOTH FRAC VALVES T/7,000 PSI. GOOD TEST. BLEED OFF PSI. RDMO B&C QUICK TEST. MIRU CASED HOLE SOLUTIONS WL. STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF F/8792'-98', 4 SPF, 24 HOLES. 8856'-60', 4 SPF, 16 HOLES. TOTAL HOLES =40 POOH. WINTERIZE WELL HEAD. SWI.
12/28/2009	7:00 - 7:30	0.50	COMP	48		Р	HSM. FRACING & PERFORATING ON A PAD WELL.
	16:29 - 17:13 18:38 - 19:13	0.73	COMP	36 36	В	P	STG 1) WHP 1015 PSI, BRK 3,076 PSI @ 5.6 BPM, ISIP 2,578 PSI, FG .73. PUMP 133 BBLS W/10/1000 SCALE INHIB., PUMP 100 BBLS @ 51 BPM @ 5,000 PSI = 100% HOLES OPEN. MP 6,656 PSI, MR 51.3 BPM, AP 4,780 PSI, AR 50 BPM, ISIP 2,672 PSI, FG .74. NPI 94 PSI. PMP 1,796 BBLS OF SW & 63,485 LBS OF 30/50 SND & 5,291 LBS OF 20/40 RESIN SND. TOTAL PROP 68,776 LBS. STG 2) PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE.
							90 DEG PHASING. RIH & SET CBP @ 8,622', PERI F/ 8582'-92', 4 SPF, 40 HOLES. WHP 1015 PSI, BRK 3,076 PSI @ 5.6 BPM, ISIP 2,578 PSI, FG .73. PUMP 100 BBLS @ 50 BPM @ 4,425 PSI = 100% HOLES OPEN. MP 5,625 PSI, MR 50.7 BPM, AP 4,075 PSI, AR 50.2 BPM, ISIP 2,690 PSI, FG .75. NPI 170 PSI. PMP 1,530 BBLS OF SW & 58,185 LBS OF 30/50 SND & 5,023 LBS OF 20/40 RESIN SND. TOTAL PROP 63,208 LBS.
	23:43 - 0:14		COMP	36	В	P	STG 3) PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH & SET CBP @ 8,320', PERF F/8,288'-90', 4 SPF, 8,258' - 62', 4SPF, 8,174' - 78', 4SPF, 40 HOLES. WHP 1,350 PSI, BRK 3,4166 PSI @ 5.8 BPM, ISIP 2,379 PSI, FG .72. PUMP 110 BBLS @ 50 BPM @ 4,550 PSI = 100% HOLES OPEN. MP 6,410 PSI, MR 51.3 BPM, AP 4,130 PSI, AR 50 BPM, ISIP 2,525 PSI, FG .74. NPI 146 PSI. PMP 1,330 BBLS OF SW & 49,380 LBS OF 30/50 SND & 4,961 LBS OF 20/40 RESIN SND. TOTAL BROOK 54.341 LBS C. (SD @ 12.14 DM).
12/29/2009	0:01 - 1:00	0.98	COMP			Р	PROP 54,341 LBS. (SD @ 12:14 PM) CONT. TO PERF & FRAC PAD WELL

3/2/2010

9:41:46AM

Operation Summary Report

	-36N4BS (GREEN)	Spud Co	onductor	: 8/26/20	09	Spud Date: 9/2/2009
Project: UTAH-	-UINTAH		Site: NB	U 922-3	6M PAD		Rig Name No: LEED 698/698
Event: COMPL	ETION		Start Da	te: 12/4/	2009		End Date:
Active Datum: I	RKB @4,981.00ft (a	above Mean	Sea Leve	UWI: S	W/SW/0	/9/S/22/	E/36/0/0/26/PM/S/538.00/W/0/453.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
	9:30 - 10:05	0.58	COMP	36	В	Р	STG 4) PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH & SET CBP @ 8,120', PERF F/ 8,086'-90', 4 SPF, 8,020' - 26', 4SPF, 40 HOLES. WHP 1,900 PSI, BRK 2,701 PSI @ 7.5 BPM, ISIP 2,115 PSI, FG .70. PUMP 100 BBLS @ 51 BPM @ 4,475 PSI = 100% HOLES OPEN. MP 5,314 PSI, MR 52.5 BPM, AP 4,170 PSI, AR 51.7 BPM, ISIP 2,174 PSI, FG .73. NPI 59 PSI. PMP 1,196 BBLS OF SW & 42,540 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL
	10:05 - 12:35	2.50	COMP	36	В	Р	PROP 47,540 LBS. STG 5) PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH & SET CBP @ 7,954', PERF F/ 7,920-24', 3 SPF, 7,856' - 60', 3SPF, 7,795'-98' 3SPF, 7,756'-58' 3SPF, 42 HOLES. WHP 1,667 PSI, BRK 2,391 PSI @ 5.1 BPM, ISIP 2,062 PSI, FG .70. PUMP 100 BBLS @ 51 BPM @ 4,050 PSI = 100% HOLES OPEN. MP 4,400 PSI, MR 53 BPM, AP 3,476 PSI, AR 51.5
	12:35 - 14:45	2.17	COMP	36	В	Р	BPM, ISIP 2,221 PSI, FG .72. NPI 159 PSI. PMP 1,930 BBLS OF SW & 71,579 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 76,579 LBS. STG 6) PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE.
							90 DEĞ PHASING. RIH & SET CBP @ 7,720', PERFF/7,634'-40', 4 SPF, 7,554' - 58', 4SPF, 40 HOLES. WHP 1,272 PSI, BRK 3,882 PSI @ 4.8 BPM, ISIP 1,767 PSI, FG67. PUMP 100 BBLS @ 50 BPM @ 4,275 PSI = 83% HOLES OPEN. MP 5,332 PSI, MR 50.6 BPM, AP 3,860 PSI, AR 50.0 BPM, ISIP 2,250 PSI, FG .73. NPI 483 PSI. PMP 1,332 BBLS OF SW & 49,552 LBS OF 30/50 SND & 5,000 LBS OF 20/40 RESIN SND. TOTAL PROP 54,552 LBS.
	14:45 - 18:11	3.43	COMP	36	В	P	STG 7) PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH & SET CBP @ 7,210', PERF F/ 7,176'-80', 3 SPF, 7,134' - 36', 3SPF, 7,098'-00' 3SPF, 7,046'-50' 3SPF, 42 HOLES. WHP 1,478 PSI, BRK 2,975 PSI @ 7 BPM, ISIP 1,826 PSI, FG69. PUMP 100 BBLS @ 51 BPM @ 3,500 PSI = 100% HOLES OPEN. MP 4,407 PSI, MR 50.8 BPM, AP 3,317 PSI, AR 50.3 BPM, ISIP 1,580 PSI, FG .66. NPI (-246) PSI. PMP 2,654 BBLS OF SW & 104,760 LBS OF 30/50 SND & 5,478 LBS OF 20/40 RESIN SND. TOTAL PROP 110,238 LBS.
	18:11 - 20:07	1.93	COMP	36	В	P	STG 8) PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH & SET CBP @ 6,960', PERI F/ 6,926'-30', 4 SPF, 6,876' - 82', 4SPF, 40 HOLES. WHP 820 PSI, BRK 2,407 PSI @ 4.6 BPM, ISIP 1,797 PSI, FG 0.69. PUMP 100 BBLS @ 51 BPM @ 3,375 PSI = 100% HOLES OPEN. MP 5,090 PSI, MR 50.9 BPM, AP 2,987 PSI, AR 50 BPM, ISIP 1,868 PSI, FG 0.70 NPI 71 PSI. PMP 2,150 BBLS OF SW & 80,529 LBS OF 30/50 SND & 6,418 LBS OF 20/40 RESIN SND. TOTAL PROP 86,941 LBS.

3/2/2010

9:41:46AM

Operation Summary Report

Well: NBU 922-)	Spud Co	nductor:	8/26/2009	Spud Date: 9/2	2/2009
Project: UTAH-	UINTAH			Site: NBI	J 922-36	M PAD		Rig Name No: LEED 698/698
Event: COMPL					e: 12/4/2			End Date:
Active Datum: F	RKB@4	,981.00ft (a	ibove Mean	Sea Leve	UWI: SV	V/SW/0/9/S/22/E	/36/0/0/26/PM/	S/538.00/W/0/453.00/0/0
Date	Sta	Time irt-End	Duration (hr)	Phase	Code	Sub P/U Code	MD From (ft)	Operation
1/5/2010	20:07	- 21:15	1.13	COMP	34	I P		KILL PLUG) RIH W/BAKER 8K CBP & SET @ 6826'. POOH & LD TOOLS. RDMO FRAC TECH & CASEDHOLE SOLUATIONS. SWI-SDFN. FREEZE PROTECT WELL HEAD. PREP TO DRLG PLUGS. MOVE OVER RIG UP RIG ND WELLHEAD NU BOPS RU FLOOR & TUBING EQUIP REPAIR
4/0/0040	7:00	7.45	0.05	00110	40			DRIVELINE ON RIG TALLEY & PU PIPE EOT @ POOH 2 JNTS TO ALLOW WATER TO FALL
1/6/2010		- 7:15	0.25	COMP	48	P		JSA PU PIPE
	7:15	- 17:30	10.25	COMP	30	Р		0 PSI ON WELL, TALLEY & PU PIPE TAG PLUG @ 6826'
								PLUG #1) DRILL THRU BAKER 8K CBP @ 6826' IN 46 MIN W/ 200# INCREASE
								PLUG #2) CONTINUE TO RIH TAG SAND @ 6930' (30' FILL) C/O & DRILL THRU BAKER 8K CBP @ 6960' IN 19 MIN W/ 100# INCREASE.
								PLUG #3) CONTINUE TO RIH TAG SAND @ 7180' (30' FILL) C/O & DRILL THRU BAKER 8K CBP @ 7218' IN 20 MIN W/ 0# INCREASE
								PLUG #4) CONTINUE TO RIH TAG SAND @ 7635' (35' FILL) C/O & DRILL THRU BAKER 8K CBP @ 7670' IN 40 MIN W/ 100# INCREASE
								PLUG #5) CONTINUE TO RIH TAG SAND @7904' (50' FILL) C/O & DRILL THRU BAKRE 8K CBP @ 7954' IN 25 MIN W/ 50# INCREASE
								PLUG #6) CONTINUE TO RIH TAG SAND @ 8085' (35' FILL) C/O & DRILL THRU BAKER 8K CBP @ 8120' IN 30 MIN W/ 50# INCREASE
1/7/2010	7:00	- 7:15	0.25	COMP	48	Р		PULL UP HOLE SWIFN JSA LAND WELL
	7:15	- 12:00	4.75	COMP	30	Р		SIWP= 2850#, OPEN WELL TO PIT BLED DOWN PRESS,
								PLUG #7) RIH TAG SAND @8292" (30' FILL) NU PWR SWVL, EST CIRC, C/O & DRILL THRU HALLI 8K CBP @ 8622' IN 21 MIN, W/ 50# INCREASE.
								PLUG #8) CONTINUE TO RIH TAG SAND @ 8592' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8622', IN 20 MIN W/ 50# INCREASE
	-							CONTINUE TO RIH TAG SAND @ 8866' (87' FILL) C/O & DRILL TO PBTD @ 8953' CIRC CLEAN RD PWR SWVL, LD 13 JNTS LAND TUBING ON HANGER, EOT @ 8552.82', RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD PUMP OFF BIT @ 1950# TURN WELL OVER TO FBC W; 13918 BBLS PUMPED, RIG REC 3200 BBLS, 10713 LEFT TO REC, RIG DOWN RIG MOVE TO YELLOW.
								KB= 13.00 HANGER= 1.00 269 JNTS OF 2-3/8" L-80= 8536.62 POBS= 2.20 EOT= 8552.82

3/2/2010

9:41:46AM

	US ROCKIES REC	
Well: NBU 922-36N4BS (GREEN)	Spud Conductor: 8/26/2009 S	pud Date: 9/2/2009
Project: UTAH-UINTAH	Site: NBU 922-36M PAD	Rig Name No: LEED 698/698
Event: COMPLETION	Start Date: 12/4/2009	End Date:
Active Datum: RKB @4,981.00ft (above N	lean Sea Leve UWI: SW/SW/0/9/S/22/E/3	6/0/0/26/PM/S/538.00/W/0/453.00/0/0
Date Time Duration Start-End (hr)	on Phase Code Sub P/U Code	MD From Operation (ft)
2/1/2010 13:30 -	PROD 50	WELL TURNED TO SALES @ 1330 HR ON 2/1/2010 - 1400 MCFD, 480 BWPD, FTP 2050#, CP 2660#, CK 18/64"

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22650
SUND	RY NOTICES AND REPORTS (ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepen e ugged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-36N4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047503670000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	PHON treet, Suite 600, Denver, CO, 80217 3779	E NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0538 FSL 0453 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSW Section: 36	IP, RANGE, MERIDIAN: 5 Township: 09.0S Range: 22.0E Meridian: S	5	STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	☐ ACIDIZE [ALTER CASING	✓ CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME
6/27/2011	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN [FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT	☐ WATER SHUTOFF [SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Wellhead Repair
12 DESCRIBE PROPOSED OR CO	MPLETED OPERATIONS. Clearly show all perti	nent details including dates, denths	<u> </u>
l .	ts approval to conduct wellhead		
on the subject we	ell location. Please find the atta	ched procedure for the	
propos	sed repair work on the subject v	well location.	Approved by the Utah Division of
			Oil, Gas and Mining
			07/11/2011
		D	ate: 0//11/2011
			y: Lor K Lint
			y
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II	
SIGNATURE		DATE	
l N/A		6/27/2011	

WORKORDER #:

Name: <u>NBU 922-36N4BS - [922-36M PAD]</u> 6/23/2011

Surface Location: SWSW Sec. 36, T9S, R22E

Uintah County, UT

API: 4304750367 **LEASE#:** ML-22650

ELEVATIONS: 4968' GL 4981' KB

TOTAL DEPTH: 9017' **PBTD:** 8953'

SURFACE CASING: 9 5/8", 36# J-55 @ 2124'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 @ 8998'

TOC @ 152' per CBL

PERFORATIONS: Mesaverde 6876' – 8860'

Tubular/Borehole	Drift	Collapse psi	Burst psi	Capacities			
	inches			Gal./ft.	Cuft/ft.		Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624		0.02171	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528		0.0872	0.0155
9.625" 36# J-55	8.921	2020	3520	3.247		0.434	0.0773
Annular Capacities							
2.375" tbg. X 4 1/2" 11.6# c	sg			0.4227	0.0565		0.01

GEOLOGICAL TOPS:

1126' Green River

1746' Mahogany

4181' Wasatch

6352' Mesaverde

NBU 922-36N4BS- WELLHEAD REPAIR PROCEDURE

PREP-WORK PRIOR TO MIRU:

- 1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
- 2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
- 3. Open casing valve and record pressures.
- 4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
- 5. Open the relief valve and blow well down to the atmosphere.
- 6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
- 7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

WORKOVER PROCEDURE:

- 1. MIRU workover rig.
- 2. Kill well with 10# brine / KCL (dictated by well pressure).
- 3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
- 4. POOH w/ tubing laying down extra tubing.
- 5. Rig up wireline service. RIH and set CBP @ ~6826'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.
- 6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.
- 7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

CUT/PATCH PROCEDURE:

- 1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 7 3/8" overshot with 4 ½" right hand standard wicker grapple, 1 4 ¾" drill collar with 3 ½" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshot, POOH, and lay down.
- 4. TIH w/ skirted mill and dress off the fish top for approximately ½ hour. TOOH.
- 5. PU & RIH w/ $4\frac{1}{2}$ " 10k external casing patch on $4\frac{1}{2}$ " P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.
- 6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 3500 psi.
- 7. Install slips. Land casing w/ 80,000# tension.
- 8. Cut-off and dress 4 ½" casing stub.
- 9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6776'. Clean out to PBTD (8953').
- 10. POOH, land tbg and pump off POBS.
- 11. NUWH, RDMO. Turn well over to production ops.

BACK-OFF PROCEDURE:

- 1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.
- 4. MIRU casing crew and wireline services. RIH and shoot string shot at casing collar @ ± 46'.
- 5. Back-off casing, POOH.

- 6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to ±7000 ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.
- 7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 3500 psi.
- 8. Install slips. Land casing w/ 80,000# tension.
- 9. Cut-off and dress 4 ½" casing stub.
- 10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6776'. Clean out to PBTD (8953').
- 11. POOH, land tbg and pump off POBS.
- 12. NUWH, RDMO. Turn well over to production ops.

STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH 4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L LOGAN ASSEMBLY NO. 510L-005 -000



COLLAPSE PRESSURE: 11,222 PSI @ 0 TENSILE 8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield: Tensile Strength w/ 0 Int. Press.= 472,791lbs. Tensile Strength w/ 10K Int. Press.= 313,748lbs.

DATA BY SLS 11/16/2009

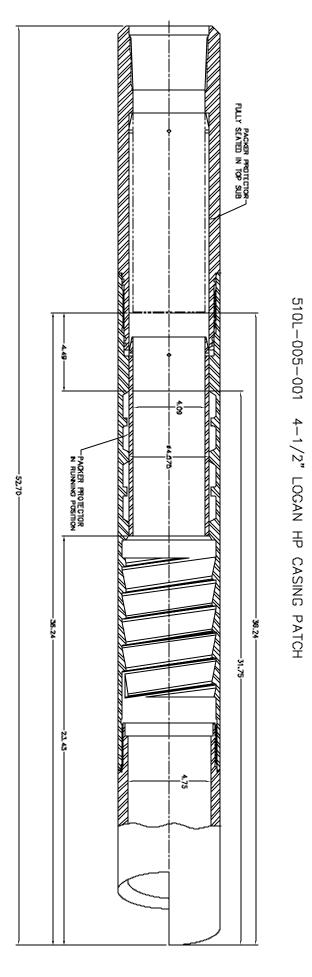


Logan High Pressure Casing Patches Assembly Procedure

All parts should be thoroughly greased before being assembled.

- 1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
- 2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type "L" Packers.
- 3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.
- 4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.
- 5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.
- 6. Install the Cutlipped Guide into the lower end of the Bowl.
- 7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.
- 8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.



RECEIVED Jun. 27, 2011

Sundry Number: 22514 API Well Number: 43047503670000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22650
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-36N4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047503670000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 8021	PHONE NUMBER: 7 3779 720 929-	9. FIELD and POOL or WILDCAT: 5NIATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0538 FSL 0453 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWSW Section:	HIP, RANGE, MERIDIAN: 36 Township: 09.0S Range: 22.0E Mer	idian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	✓ CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
9/9/2011	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
,		J OTHER	OTHER
	WILDCAT WELL DETERMINATION	₩ OTHER	OTHER.
The operator has co	COMPLETED OPERATIONS. Clearly show Oncluded the wellhead/casin ase see the attached chrone details of the operations	ng repairs on the subject ological history for the	
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUM 720 929-6304	BER TITLE Regulartory Analyst	
SIGNATURE	120 323-0304	DATE	
N/A		1/24/2012	

						S ROC		EGION I ry Report	
Well: NBU 922-3	36N4BS (GREEN)		Spud Cor	nductor: 8	3/26/2009		Spud Date: 9/2	2/2009
Project: UTAH-L	JINTAH			Site: NBL	922-36N	/I PAD			Rig Name No: SWABBCO 6/6
Event: WELL W	ORK EXP	PENSE		Start Date	e: 9/6/201	11			End Date: 9/9/2011
Active Datum: R Level)	KB @4,9	81.01ft (abo	ve Mean Sea		UWI: S\	N/SW/0/9	/S/22/E/3	6/0/0/26/PM/S/5	38.00/W/0/453.00/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/6/2011	7:00	- 7:15	0.25	WO/REP	48		Р		JSA= WELL CONTROL
9/7/2011	7:15	- 17:00	9.75	WO/REP	30		Р		RD RIG ON 36M3T MOVE RU CONT WELL W/ 20 BBLS TMAC ND WELLHEAD NU BOPS RU FLOOR & TUBING EQUIP CONT TUBING W/ TMAC UNLAND WELL POOH W/ 269 JNTS LD BHA RU W/L RIH W/ GUAGE RNG TO 6850' PU 10K CIBP RIH SET @ 6810' DUMP BAIL 2 SKS CEM ON CIBP FILL HOLE W/ TMAC PRESS TEST TO 500# SIW PREP TO REPAIR W/H IN AM SDFN
9/7/2011		- 7:15	0.25	WO/REP	48		P		JSA= PRESS TEST
		- 17:00	9.75	WO/REP	30		Р		SIWP=0 PSI ND BOPS PU INT CUTTER RIH CUT BELOW HNGR ND WELLHEAD PU OVERSHOT RUN ONTO CSG APPLY LH TORQUE RU W/L RIH W/ STRING SHOT @ BACK OFF PUP LAY ALL DWN PU 10' PUP RIH ONTO CSG TORQUE ALL TO 7000# 26 RNDS NU TESTER TEST TO 3500# SET SLIPS W/ 90000# NU W/H & BOPS RU FLOOR & TUBING EQUIP PU 3-7/8 BIT RIH TAG TOC @ 6790' PREP TO D/O IN AM SIW SDFN
9/8/2011		- 7:15	0.25	WO/REP	48		Р		JSA= FOAMING
		- 17:00	9.75	WO/REP	30		Р		SIWP= 0 PSI NU FOAM AIR UNIT EST CIRC C/O & DRILL THRU CEM & CIBP @ 6810' CIRC CLEAN CONTINUE TO RIH TAG @ 8570' EST CIRC C/O & DRILL THRU BRIDGE CONT TO RIH TAG @ 8880' EST CIRC C/O & DRILL TO 8940' CIRC CLEAN RD PWR SWVL POOH LD BIT PU 1.87XN RIH W/ 120 JNTS SIW SDFN
9/9/2011	7:00	- 7:15	0.25	WO/REP	48		Р		JSA= WELL CONTROL
	7:15	- 7:24	0.15	WO/REP	30		Р		SIWP= 850 PSI CONT WELL W/ TMAC CONT TO RIH LAND TUB ON HNGR W/ 269 JNTS EOT @ 8552.82' RIH W/ BROACH TO XN NPL RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD SIW RD RIG MOVE RIG & EQUIP TO BON 1023-18E PAD RU RIG PREP TO POOH W/ TUBING SDFN

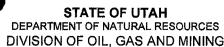
10/17/2011 8:34:30AM 1

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Cor	mpany:l	KERR-	McGEE (OIL & G	AS ONSH	ORE,	<u>L.P.</u>	
Well Name	•]	NBU 922.	-36N4BS				
Api No:	43-047-503	67	L	ease Type		STAT	E	
Section_36	Township	09S	Range_	22E	_County_	UIN	ТАН	
Drilling Cor	ntractor	PETE	MARTI :	N DRLG	R	IG #	145	
SPUDDE	D:							
	Date	08/26/2	009	_				
	Time	11:00	AM					
	How	DRY		_				
Drilling wi	II Commend	ce:						
Reported by			JAMES (GOBER				
Telephone#			(435) 82	8-7024				
Date	08/27/2009	Sig	ned	CHD				

STATE OF UTAH **DEPARTMENT OF NATURAL RESOURCES**



ENTITY ACTION FORM

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

state CO zip 80217 Phone Number: (720) 929-6100

Well 1

API Number	Well	Name	QQ	Sec	Twp	Rng	County
4304750367	NBU 922	-36N4BS	swsw	36	98	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	S	pud Da	te	2	y Assignment fective Date
B	99999	2900	8	/26/200	9	8/	27/09

Comments:

MIRU PETE MARTIN BUCKET RIG. WS7WB

SPUD WELL LOCATION ON 08/26/2009 AT 11:00 HRS. BHL = SESW

Well 2

API Number	Well	Name	QQ	Sec	Twp	Rng	County
4304750366	NBU 92	2-36M3T	swsw	36	98	22E UIN	UINTAH
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		y Assignment ective Date
B.	99999	2900	8	/26/200	9	8/	27/09

MIRU PETE MARTIN BUCKET RIG. WSM VD

SPUD WELL LOCATION ON 08/26/2009 AT 13:00 HRS. BHL=SWSW

Well 3

API Number	Weil	Name	QQ	Sec	Twp	Rng	County
4304750368	NBU 922-36L4BS		SWSW 36		98	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		ity Assignment ffective Date
B	99999	2900	8	/26/200	9	8,	137/09
Comments:		1.1 ~ 500	411				

MIRU PETE MARTIN BUCKET RIG. ω \sim m

SPUD WELL LOCATION ON 08/26/2009 AT 15:00 HR\$.

BHL : NWSW

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity

 Cther (Evolution in comments' section)

 RECEIVED

AUG 2 7 2009

AND)	YL	Υ.	ΓL	E
------	----	----	----	---

Name (Please Print)

Signature

Title

REGULATORY ANALYST

8/27/2009

Date

(5/2000)